CITY OF MANCHESTER.

REPORT

ON THE

Health of the City of Manchester,

1931,

BY

R. VEITCH CLARK, M.A., M.B., Ch B., B.Sc., D.P.H.

PUBLIC HEALTH OFFICE,
CIVIC BUILDINGS,
1, MOUNT STREET, MANCHESTER,
August, 1932.

MY LORD MAYOR, ALDERMEN,
AND MEMBERS OF THE CITY COUNCIL.

The report on the health of the City for the year 1931 has been compiled in accordance with the memorandum of the Ministry of Health.

The following are the principal facts in the general vital statistics for the year :—

Population.

The census taken on 26th–27th April, 1931, gives the Manchester population as 766,333, of which 361,069 are males and 405,264 females.

Marriage Rate.

The marriage rate for the year was 16·2. This is 1·1 lower than the average of the last five years.

Birth Rate.

The birth rate for 1931 is the lowest recorded, and is 1·5 less than the average of the last five years.

Death Rate.

The death rate of 13·9 for the year shows an increase of 0·8 over the previous year. The average for the five years 1926-30 is 13·8.

Infantile Mortality.

Infantile mortality for the year is 84·0 per 1,000 births, or 5 per 1,000 births higher than the previous year, which was our lowest recorded. The average for the last five years is 88.

Maternal Mortality.

It is gratifying to record a maternal mortality rate for the year of 3·26 per 1,000 births, which is the lowest since the year 1925, and is a reduction of 1·29 per 1,000 births on the average of the previous five years.

I have the honour to be,

Your obedient Servant,

R. VEITCH CLARK,
Medical Officer of Health.

STATISTICAL.

The following are general statistics for the year 1931 :-

Area of the City in acres		27,257
Census population for the year 1931	Males ..... 361,069 Females 405,264	766,333
No. of persons per acre		28
Persons married per 1,000 of population in the area of the Manchester Union		16·17
Live Births in the City of Manchester	Males ..... 6,301 Females ... 5,949	12,250
Live birth-rate per 1,000 of population		15·98
Still-births	Males ..... 362 Females .. 266	628
Deaths	Males .... 5,451 Females ... 5,167	10,618
Recorded annual death-rate per 1,000 of population	Males ..... 15·10 Females ... 12·75	13·86
Deaths under 1 year of age per 1,000 births		83·84
Excess of registered births over deaths		1,632
Percentage of mortality occurring in public institutions		46·85

No. of occupied undivided private houses at the Census in June, 1921		141,311
,, ,, ,, ,, ,, tenements, blocks of flats, shops, etc, at the Census in June, 1921		155,017
No. of persons per occupied undivided private house (Census 1921)		4·35
,, ,, all occupied dwellings (Census 1921)		4·71
,, ,, ,, ,, 1931 (Based on 182,800 houses as supplied by the Waterworks Department)		4·19
No. of new houses erected during 1931 :—		
By Local Authority	1,380	
By other bodies or persons	1137	
		2,517

City of Manchester (299, Oldham Road)—Meteorology, 1931. (Means of the Monthly Readings.)

	Barometer	Dry Bulb	Wet Bulb	Humidity	Maximum Temperature	Minimum Temperature	Mean Temperature in Shade	Sun Maximum	Grass Maximum	One Foot	Four Feet	Total Rainfall (inches)	Total No. of Wet Days	Total Hours of Sunshine	Average Mean Daily Temperature 1881-1915 (extracted from the book of normals)	Average Rainfall 1892-1931	Average Hours of Sunshine 1892-1931	Fog Noted
January	29·873	38·6	37·7	92	41·9	36·1	39·0	48·3	34·6	38·4	43·2	5·43	25	14·2	39·1	3·11	10·70	1st, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 21st, 27th, and 30th
February ..	29·834	39·0	37·7	88	43·4	36·3	40·0	55·8	34·8	38·2	42·0	4·29	24	20·3	40·1	2·43	29·54	2nd and 7th
March	29·903	39·0	36·5	78	46·5	35·0	40·8	77·7	32·3	38·2	41·3	0·30	10	118·1	42·3	2·38	73·80	2nd, 12th, 14th, 22nd, 26th, and 27th
April	29·890	46·4	43·2	76	51·6	42·4	47·0	84·0	40·2	45·2	44·7	3·29	25	83·6	46·8	1·96	114·65	10th
May	29·834	54·4	49·6	70	61·0	47·5	54·2	97·8	44·9	51·5	48·7	2·78	20	153·6	52·6	2·33	144·62	
June	29·954	57·8	53·8	76	64·9	52·7	58·8	102·3	49·8	59·3	54·6	5·49	19	110·4	58·4	2·43	151·21	
July	29·756	60·3	56·0	77	66·0	55·7	60·8	105·8	51·4	61·0	57·9	4·38	29	88·0	60·8	2·99	138·89	
August	29·895	57·9	54·2	78	65·0	53·2	59·1	98·0	48·4	59·8	58·7	7·87	18	128·1	59·9	3·79	117·81	
September ..	30·144	53·3	50·7	82	59·6	50·1	54·9	87·6	45·7	55·4	56·6	3·28	19	70·2	56·4	2·60	97·76	
October	30·132	48·6	45·0	83	54·5	44·0	49·4	77·1	37·6	49·9	54·4	1·98	13	62·6	49·8	3·39	56·36	10th, 14th, 15th, 16th, 21st, 22nd 23rd, 26th, and 28th
November ..	29·730	46·8	45·4	89	50·4	44·4	47·4	63·2	40·6	46·0	49·1	6·00	23	19·1	43·6	3·04	18·42	18th, 22nd, 29th, and 30th
December ..	30·239	43·0	41·2	85	45·9	39·6	42·7	53·4	38·8	42·9	47·1	1·94	21	8·7	40·4	3·46	6·70	1st, 6th, 17th, 18th, 19th, 20th, 21st, 30th, and 31st
Year ..	29·932	48·7	45·9	81	54·2	44·7	49·5	79·3	41·6	48·8	49·9	47·03	246	876·9	49·2	33·89	960·46	

The extent to which Institutions are used is to some extent represented in the following table :—

TABLE I.

DEATH-RATES IN THE HOMES OF THE PEOPLE AND IN INSTITUTIONS FOR 5 YEARS 1927–1931.

YEAR	Estimated Populations to middle of Year	Death rate per 1000 of persons dying in their own homes	Death-rate per 1000 of persons dying in Institutions	Total death-rate per 1000
1927	757,319	8·07	5·83	13·90
1928	759,563	7·39	5·67	13·06
1929	761,813	8·93	6·58	15·51
1930	764,070	6·97	6·10	13·07
1931	766,333	7·4	6·5	13·86

The chief causes of death are shown below for each of the years 1926–1931 :—

TABLE 2.

	1926	1927	1928	1929	1930	1931
Tuberculosis of the Lungs ..	905	881	843	930	903	855
Tuberculosis (other forms).. ..	170	172	149	152	174	132
Diseases of the Heart	1104	1152	1155	1540	1398	1642
Cerebral Hæmorrhage, Apoplexy, Hemiplegia	502	422	426	456	426	494
Pneumonia	799	952	905	1305	879	1010
Bronchitis	1065	1194	835	1029	661	866
Digestive Organs	348	323	351	346	354	337
Atrophy, Debility (chiefly in infants)	56	42	36	40	55	45
Old Age..	435	353	362	469	378	416
Premature Birth	254	250	250	270	252	231
Nephritis and Bright's Disease..	255	275	338	296	319	311
Convulsions	59	59	44	44	32	34
Inflammation of the Brain ..	34	34	37	46	36	17
Diarrhœa and Dysentery	237	118	203	185	153	151
Measles	156	164	123	60	146	65
Scarlet Fever	25	20	14	11	16	8
Whooping Cough	61	124	89	220	37	86
Diphtheria	103	91	99	57	58	60
Influenza	214	455	175	704	129	340
Malignant Disease	1099	1083	1107	1135	1153	1240

TABLE 3.

Gains and Losses in 1931 *per* 1,000 *persons living, as compared with the average for the* 10 *years* 1921–1930.

Gains.

Scarlet Fever	0·03
Measles	0·13
Diphtheria	0·02
Whooping Cough	0·06
Diarrhœal Diseases	0·08
Puerperal Fever	0·01
Phthisis	0·09
Tubercular Meningitis	0·01
Tubercular Peritonitis: Tabes Mesenterica	0·02
Tubercular Diseases (other)	0·06
Premature Birth	0·07
Nervous Diseases	0·05
Bronchitis	0·29
Digestive System	0·02
Old Age	0·06
Total	1·00

Losses.

Influenza	0·02
Cancer	0·23
Erysipelas	0·01
Pyæmia and Septicæmia	0·02
Diseases of the Heart and Blood Vessels	0·68
Pneumonia	0·04
Rheumatic Fever	0·03
Urinary System	0·02
Total	1·05
Balance of Loss from above Causes	0·05
„ „ all Causes	0·12

INFANTILE MORTALITY.

Table 4.

Deaths per 1,000 *births at the ages* 0—2 *months,* 3–5 *months, and* 6–11 *months in successive years.*

Years	Months of Age			
	0–2	3–5	6–11	Under 1 year
1891–1895 (mean) ..	82·79	40·99	62·97	186·75
1896–1900 (mean) ..	83·44	42·43	66·28	192·16
1901–1905 (mean) ..	81·02	37·52	54·24	172·78
1906–1910 (mean) ..	73·89	29·12	44·27	147·28
1911–1915 (mean) ..	69·23	24·38	39·26	132·88
1916–1920 (mean) ..	58·46	17·72	28·65	104·82
1921–1925 (mean) ..	52·46	15·63	27·38	95·45
1926–1930 (mean) ..	49·77	15·76	22·33	87·86
1926	49·14	14·62	22·86	86·62
1927	48·62	13·84	23·31	85·77
1928	50·97	17·51	22·39	90·87
1929	52·10	18·03	27·17	97·30
1930	48·02	14·78	15·93	78·73
1931	50·61	13·31	19·92	83·84

Table 5 allows a comparison with former years in respect of the infantile mortality rates from different causes for the whole of the first year of life.

TABLE 5.

CITY OF MANCHESTER.

CAUSES OF DEATH	DEATHS UNDER ONE YEAR PER 1,000 BIRTHS					
	1926	1927	1928	1929	1930	1931
All causes	86·62	85·77	90·87	97·30	78·73	83·84
Smallpox	..	..	..	..	..	..
Chickenpox	0·29	0·15	0·08	..	..	0·08
Measles	2·29	3·44	3·64	1·38	3·00	0·90
Scarlet Fever	..	0·23	..	..	..	0·08
Whooping Cough	2·08	3·67	3·33	5·76	1·53	2·29
Diphtheria	0·72	0·92	1·08	0·77	0·23	0·49
Erysipelas	0·21	0·31	0·08	0·15	0·46	0·33
Tuberculous Meningitis	0·79	0·38	0·39	0·77	0·38	0·73
Abdominal Tuberculosis	0·22	0·15	0·23	0·15	0·15	..
Other Tuberculous Diseases	0·50	0·38	0·39	0·15	0·69	0·33
Meningitis (*not Tuberculous*)	0·64	0·46	0·70	0·92	0·77	0·65
Convulsions	3·08	3·97	2·71	3·07	2·14	2·12
Bronchitis	6·24	6·34	7·05	5·83	5·44	5·88
Pneumonia (all forms)	13·54	13·68	16·11	20·18	11·33	15·59
Diarrhœa and Enteritis	13·83	10·17	13·24	12·35	10·57	10·86
Gastritis	0·57	0·54	0·39	0·77	0·77	..
Syphilis	0·57	0·61	0·54	0·54	0·77	0·65
Rickets	0·36	0·08	0·54	0·23	0·15	0·08
Injury at Birth	2·58	2·60	2·48	3·07	2·37	3·26
Atelectasis	0·93	1·60	1·70	2·15	1·76	2·04
Congenital Malformation	6·88	6·19	6·14	5·45	5·44	5·96
Premature Birth	18·20	19·11	19·36	20·72	19·30	18·78
Atrophy, Debility, and Marasmus	3·94	2·98	2·79	2·99	4·06	3·67
Overlying, found dead in bed, and suffocation	1·15	0·46	0·62	0·46	0·38	0·74
Other causes	7·01	7·35	5·97	9·44	7·04	8·65

PUBLIC ASSISTANCE.

This is shown in the table on page 8, compiled from a monthly statement furnished to the Hospitals Sub-Committee. Further particulars are given in the statement below, obtained from the Public Assistance Officer.

Cases maintained by or chargeable to the Public Assistance Committee on the 1st January, 1932.

(A) RETURN OF MENTAL CASES.

Institution	Class of Case Maintained	Suffering from Mental Infirmity
1. *Establishments*		
(*a*) *Belonging to Manchester :—*		
Crumpsall Institution	General Hospital and Lunacy	634
Swinton Home	Mentally deficient children..	140
(*b*) *Belonging to other Authorities :—*		
Garstang	Feeble-minded persons ..	1
Ulverston	,, ,, ..	11
West Derby	Mentally deficient persons ..	2
2. *County Mental Hospitals :—*		
Lancaster	Persons of unsound mind ..	398
Prestwich	,, ,, ..	1,004
Winwick	,, ,, ..	570
Whittingham	,, ,, ..	189
Rainhill	,, ,, ..	124
Sandlebridge School, Alderley Edge.	Mentally defective adults ..	7
All Souls' Special School, Hillingdon, Essex	Feeble-minded girls	3
Cumnor Rise Home, Botley, Oxford.		3
Stoke Park Colony, Bristol	Feeble-minded persons ..	22
Whittington Hall, Chesterfield ..		8
Pontville Home, Ormskirk	Feeble-minded boys	0
Durran Hill House, Carlisle	Mentally defective women ..	5
St. Joseph's Home, Sudbury	Feeble-minded young women	1
Allerton Priory, Woolton, Lancs. ..	Feeble-minded children ..	1
Royal Albert Institution, Lancaster.	Feeble-minded adults	9
	Carried forward..	3,132

RETURN OF MENTAL CASES—*Continued.*

Institution	Class of Case Maintained	Suffering from Mental Infirmity
	Brought forward	3,132
St. Raphael's Colony for Epileptics and Mental Defectives, Northan, near Potter's Bar	Feeble-minded persons ..	1
	Total	3,133

(B) MATERNITY CASES.

	Number
Simpson Hill	3
Crossley Home	1
Central Hall	2
Macalpine Home	0

THE NUMBER OF PERSONS WHO WERE IN RECEIPT OF RELIEF FROM THE MANCHESTER PUBLIC ASSISTANCE COMMITTEE DURING THE LAST WEEK IN EACH MONTH OF THE YEARS 1931 AND 1930.

	1931		1930	
	Indoor	Out-door	Indoor	Out-door
January	4,172	29,743	4,995	22,284
February	4,206	29,182	5,016	22,715
March	4,082	29,358	4,958	22,735
April	3,917	29,798	4,138	19,381
May	3,711	28,161	3,966	18,320
June	3,744	28,881	3,879	18,928
July	3,809	29,149	3,903	18,425
August	3,843	31,125	3,999	20,711
September	3,840	31,104	3,952	21,357
October	3,860	31,728	3,935	22,282
November	3,940	37,126	4,056	23,832
December	3,994	40,010	4,108	26,339

TABLES.

1931

TABLE A.—MANCHESTER, 1931.

CAUSES OF DEATH AT DIFFERENT LIFE PERIODS IN THE 52 WEEKS OF THE YEAR.

PERSONS.—(MALES AND FEMALES.)

CAUSES OF DEATH	Ages at Death													
	All Ages	Under 5 Years		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
		0 to 1	1 to 5											
All Causes	10618	1027	503	148	89	198	240	535	733	1226	1918	2338	1391	272
A.—General Diseases	3913	627	229	77	51	129	148	295	315	496	684	627	214	21
B.—Local Diseases	5875	343	252	52	31	53	74	199	378	665	1159	1526	965	178
C.—Other Specified Dis.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
D.—Ill-defined Diseases	481	46	...	...	...	...	1	3	1	5	21	148	188	68
E.—Violent Deaths	349	11	22	19	7	16	17	38	39	60	54	37	24	5
A.—General Diseases.														
Smallpox.. Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox.. Not Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox.. No Statement	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cowpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chickenpox	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Measles	65	11	49	5	...	...	...	...	...	...	...	...	...	..
Rubella	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever..	8	1	5	1	...	...	...	...	1	...	...	...	...	...
Typhus	...	...	...	...	...	...	...	...	...	..	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	340	12	9	2	5	12	5	26	37	55	59	71	40	7
Whooping Cough	86	28	54	3	...	...	...	...	...	...	1	...	...	...
Mumps	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	60	6	16	32	4	...	1	...	1	...	...	...	...	...
Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Fever	29	9	9	1	1	3	1	1	...	3	1	...	...	...
Simple Cont: Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	4	...	...	...	...	1	...	1	...	1	1	...	...	...
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Diarrhœa	5	5	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	143	128	15	...	...	...	...	...	...	...	...	...	...	...
Dysentery	3	...	...	...	...	...	...	...	1	1	...	...	1	...
Malarial Fever	1	...	...	...	...	...	1	...	...	...	...	...	...	...
Trench Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Actinomycosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hydrophobia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Glanders	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Anthrax	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tetanus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Syphilis	24	8	1	...	...	2	1	1	1	5	3	2	...	...
Gonorrhœa, Strict: Urethra	16	...	...	...	...	...	...	...	...	5	5	5	1	...
Puerperal.. Septicæmia	11	...	...	...	...	...	4	4	3	...	...	...	...	...
Puerperal.. Pyæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal.. Phlegmasia Dol.	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal.. *Fever*	4	...	...	...	...	..	2	2	...	...	...	...	...	...
Infective Endocarditis	23	...	...	...	...	3	7	5	3	2	2	1	...	...
Leprosy	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Psittacosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	28	4	1	...	..	...	1	...	...	2	7	10	3	...
Septicæmia (not puerp:)	30	5	1	1	1	3	...	5	2	3	8	...	1	...
Pyæmia (not puerp:)	5	...	...	...	2	1	...	...	2	...	...	...	...	...
Phlegmon	10	2	...	...	1	...	...	...	2	1	3	1	...	...
Phagedæna	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Septic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tubercular Phthisis	812	3	4	6	9	65	106	189	141	156	103	28	2	...
Phthisis	43	...	...	...	1	2	5	6	10	10	6	3	...	...
Tubercular Meningitis	74	9	34	9	6	6	...	7	1	2	...	...	...	...

TABLE A, 1931—*continued.*

CAUSES OF DEATH	Ages at Death													
	All Ages	Under 5 Years		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
		0 to 1	1 to 5											
—General Diseases— *continued*														
rcular Peritonitis	23	...	7	...	1	5	1	4	2	2	...	1	...	...
s Mesenterica	1	...	...	...	...	1	...	...	...	...	...	...	...	...
s	...	...	...	...	...	...	...	...	...	...	...	...	...	...
rcle of other organs	27	1	1	1	1	3	1	4	6	1	5	3	...	...
ral Tuberculosis	7	...	1	1	1	1	...	1	...	...	1	1	...	...
ula	...	...	...	...	...	...	...	...	...	...	...	...	...	...
sitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ation	...	...	...	...	...	...	...	...	...	...	...	...	...	...
y	...	...	...	...	...	...	...	...	...	...	...	...	...	...
holism, Delirium Tremens	9	...	...	...	...	...	...	...	1	3	2	3	...	...
m, Morphia Habit	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poisoning	...	...	...	...	...	...	...	...	...	...	...	...	...	...
strial poning — Lead	1	...	...	...	...	...	...	...	...	1	...	...	..	...
strial poning — Phosphorus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
strial poning — Arsenic, &c.	...	...	...	...	...	...	...	...	...	...	...	...	..	...
m: Fever, Acute Rheum:	84	...	2	7	11	9	3	8	11	8	16	8	1	...
matism of Heart	5	...	...	...	1	...	...	...	...	2	1	1	...	...
nic Rheumatism	39	...	...	2	2	...	1	1	1	6	7	12	7	...
m: Arthritis, Rheum: Gout	44	...	...	...	...	2	...	1	2	2	8	19	9	1
	...	...	...	...	...	...	...	...	...	...	...	...	...	..
er—Buccal Cavity	73	...	...	1	...	...	...	...	1	6	30	29	5	1
Stomach and Liver	384	...	...	...	...	...	1	5	21	65	115	134	41	2
Peritoneum, Intest., Rectum	231	...	...	...	...	1	..	3	8	23	68	91	34	3
Female Genital Organs	109	...	...	...	...	...	...	2	15	34	30	22	6	...
Breast	121	...	...	...	...	...	...	3	12	22	36	29	18	1
Skin	21	...	...	...	...	...	...	...	...	5	8	5	3	...
Others or unspecified	301	...	...	...	...	2	3	5	21	44	104	89	29	4
ets	7	1	6	...	...	...	...	...	...	...	...	...	...	...
ura	3	...	1	...	...	...	...	2	...	...	...	...	...	..
nophilia, Hæm: Diathesis	1	...	...	...	...	...	...	1	...	...	...	...	...	..
mia, Leucocythæmia	72	1	1	2	1	2	3	4	6	14	22	14	1	1
etes Mellitus	112	...	...	...	1	3	1	3	3	12	32	45	11	1
r Constitutional Diseases	4	...	1	...	1	...	...	1	...	...	...	...	1	...
ature Birth	231	230	1	...	...	...	...	...	...	...	...	...	...	...
renital Defects	85	73	6	3	1	2	...	...	...	...	...	...	..	..
y at Birth	40	40	...	...	...	...	...	...	...	...	...	...	..	..
ectasis	25	25	...	...	...	...	...	...	...	...	...	...	...	...
of Breast Milk	...	...	..	...	...	...	...	...	...	...	...	...	...	...
ning	5	1	4	...	...	...	...	...	...	...	...	...	...	...
rs of Early Infancy	22	22	...	...	...	...	..	...	...	...	...	...	...	...
Local Diseases.														
NERVOUS SYSTEM.														
nmation of Brain	17	...	...	5	2	2	2	1	1	3	1	...	...	...
ning of Brain	3	...	...	...	...	...	...	...	...	...	..	2	1	...
ral Paraly: of Insane	10	...	...	...	...	...	...	2	6	2	...	...	...	...
ity (not puerperal)	102	...	...	...	...	...	...	8	17	27	28	16	5	1
ea	...	...	...	...	...	...	...	...	...	...	...	...	..	..
psy	38	1	...	1	1	1	2	8	9	3	8	4	...	...
ulsions	34	26	8	...	...	...	...	...	...	...	...	..	...	...
ngismus Stridulus	...	...	...	...	...	...	...	...	...	...	...	...	...	..
motor Ataxy	13	...	...	...	...	...	...	...	...	3	5	3	2	...
of Spinal Cord	38	...	...	...	...	2	2	3	7	7	5	5	5	2
itis	11	...	...	...	...	...	...	1	...	...	2	6	2	...
Tumour	26	...	...	1	1	2	2	2	8	8	2	...	...	...
Encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
phalitis Lethargica	25	...	...	1	...	6	3	4	2	5	2	1	1	...
ous System (Other Dis:)	28	11	3	1	...	1	1	3	1	3	4	...	...	...
DISEASES OF SPECIAL SENSE ORGANS.														
, Mastoid Disease	27	1	3	3	4	2	2	5	1	1	2	2	1	...
axis, Nose Disease	1	...	...	...	...	1	...	...	...	...	...	...	...	..
halmia, Eye Disease	...	...	...	...	...	...	...	...	...	...	...	...	..	...

TABLE A, 1931—*continued.*

CAUSES OF DEATH	All Ages	Under 5 Years: 0 to 1	Under 5 Years: 1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
	Ages at Death													
3. Diseases of Heart.														
Valvular Dis : Endocarditis	442	2	2	4	2	11	12	25	36	60	99	131	46	1
Pericarditis	9	...	1	2	...	...	...	...	3	1	1	1	...	....
Hypertrophy of Heart.....	...	...	...	...	...	...	...	...	...	...	...	...	...	....
Angina Pectoris	49	...	...	...	...	...	...	...	2	9	15	18	4	
Dilatation of Heart	35	...	...	...	...	...	...	...	1	3	9	10	10	
Fatty Degen : of Heart	50	...	...	...	...	...	...	...	7	16	19	6	2	...
Syncope, Heart Disease.....	1057	1	2	...	1	1	2	4	30	74	223	394	282	4
4. Dis : of Blood Vessels.														
Cerebral Hæmorrhage.....	418	3	...	...	...	...	...	3	12	38	112	163	78	
Apoplexy, Hemiplegia.....	76	...	...	...	...	...	...	...	...	6	19	28	21	
Aneurism	34	...	...	...	...	...	...	...	2	5	6	12	6	
Senile Gangrene	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Embolism, Thrombosis	109	...	...	...	...	...	...	2	7	12	26	35	20	
Phlebitis.....	3	...	...	...	...	...	...	...	...	2	...	1	...	...
Varicose Veins	3	...	...	...	...	...	...	...	...	1	...	2	...	...
Blood Vessels (Other Diseases)	389	1	...	...	...	...	...	...	6	21	55	134	132	4
5. Dis : of Respiratory Sys :														
Laryngitis	1	1	...	...	...	...	...	...	...	...	...	...	...	...
Memb: Laryng: (Not Diphth:)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Croup.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Larynx (Other Dis:)	3	...	1	1	...	...	...	...	...	1	...	...	...	...
Bronchitis	866	72	23	,,	3	5	1	9	35	78	172	247	184	3
Pneumonia { Lobar-Croupous.	430	26	45	10	4	7	12	40	64	76	74	51	21	...
Pneumonia { Broncho-Lobular.	557	163	138	5	...	3	4	20	21	43	55	64	37	
"*Pneumonia*".....	23	2	2	1	...	...	...	3	4	3	5	2	...	
Emphysema, Asthma	36	...	1	...	...	...	...	1	2	13	9	6	4	...
Pleurisy	16	...	3	3	...	...	1	2	2	3	...	2	...	...
Fibroid Disease of Lung.....	3	...	...	...	...	...	...	...	1	1	1	...	...	...
Respiratory Dis: (Other)	48	1	...	...	...	...	1	2	10	8	8	7	10	
6. Dis: of Digestive Sys:														
Tonsillitis, Quinsy	6	...	2	1	...	...	...	3	...	...	...	...	...	...
Mouth, Pharynx	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Gastric Ulcer.....	74	...	...	...	...	...	...	3	16	18	21	13	3	...
Gastric Catarrh.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stomach (Other Dis:).....	17	8	3	1	...	...	...	...	...	...	...	1	3	
Enteritis.....	12	...	1	1	2	...	...	..	...	2	5	1	...	..
Gastro-Enteritis.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Appendicitis, Perityph :	48	...	1	3	1	2	8	5	3	7	10	7	1	..
Hernia	36	5	...	...	...	...	...	...	2	5	7	7	9	
Intestinal Obstruct:.....	37	7	1	...	3	2	1	2	1	4	6	6	3	
Other Diseases of Intestines ...	11	...	1	1	...	...	...	1	1	3	1	3	...	..
Peritonitis	19	...	6	2	1	...	...	2	1	3	1	3	...	..
Cirrhosis of Liver.....	27	...	...	...	...	...	...	1	2	6	10	7	1	...
Liver	21	...	...	...	...	...	...	...	...	4	5	5	6	
Biliary Calculi	17	...	...	...	...	...	...	...	1	2	4	5	5	..
Digestive System (Other Dis:)...	11	1	2	1	...	1	...	1	...	1	3	...	1	..
7. Dis : of Lymphatic and Ductless Glands.														
Spleen, Disease of.....	...	...	...	...	...	...	...	...	...	...	...	...	...	..
Lymphat: Syst: (Other Dis:)...	22	2	...	...	1	...	2	2	3	6	5	1	...	..
Thyroid Body (Other Dis:) ...	6	...	...	...	...	...	...	...	...	...	3	2	1	..
Addison's Dis : (Dis: of)	5	...	...	...	...	...	...	...	1	1	2	1	...	..
8. Diseases of Urinary System.														
Nephritis Ac: Uræmia	48	...	3	...	1	2	4	3	7	4	10	10	4	..
Ch : Bright's Dis : Albumin : ...	263	...	...	...	1	1	5	9	29	45	67	68	34	
Calculus	4	...	...	...	...	...	...	...	...	1	2	1	...	..
Bladder and Prostate Dis : ..	60	...	...	...	...	...	...	...	...	1	16	23	16	
Urinary Syst : (Other Dis :) ...	11	...	...	1	...	...	1	...	2	1	4	1	1	..

TABLE A, 1931—*concluded.*

AUSES OF DEATH	Ages at Death													
	All Ages	Under 5 Years		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
		0 to 1	1 to 5											
SEASES OF GENERATIVE SYSTEM.														
n Tumour	8	...	...	...	...	...	...	1	1	1	1	2	1	1
Dis : of Ovary	4	...	...	...	...	...	...	1	...	1	2	...	...	...
e Tumour	4	...	...	...	...	...	...	...	1	3	...	...	...	...
Dis: of Uterus and Vagina	6	...	...	...	...	...	...	...	2	4	...	...	...	...
l : of Menstruation	...	...	...	...	...	...	...	...	...	...	...	...	...	...
: and Mam: Orgs: (Other)	1	...	...	...	...	...	...	...	1	...	...	...	...	...
ISEASES OF PREGNANCY AND CHILDBIRTH.														
ion, Miscarriage	4	...	...	...	...	...	...	3	1	...	...	...	...	...
eral Mania	2	...	...	...	...	...	...	1	1	...	...	...	...	...
eral Convulsions	1	...	...	...	...	...	...	...	1	...	...	...	...	...
nta Præv: Flooding	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Ac: of Preg: & Childbirth	17	...	...	...	...	...	5	9	3	...	...	...	...	...
ISEASES OF LOCOMOTOR SYSTEM.														
, Necrosis	4	...	...	...	1	...	1	...	...	2	...	...	...	...
tis, Periostitis	4	...	...	...	...	...	...	1	...	...	2	...	1	...
notor Sys : (Other)	10	1	...	3	1	...	...	...	1	1	1	2	...	...
ISEASES OF THE SKIN.														
, Bedsore	...	...	...	...	...	...	...	...	...	...	...	...	...	...
na	...	...	...	...	...	...	...	...	...	...	...	...	...	...
higus	6	6	...	...	...	...	...	...	...	...	...	...	...	...
Diseases (Other)	16	2	...	...	...	1	...	2	...	3	3	4	1	...
Other Specified Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ll-defined and not Specid Diseases.														
hy, Debility	45	45	...	...	...	...	...	...	...	...	...	...	...	...
lge	416	...	...	...	...	...	...	...	...	1	15	145	187	68
sy, Ascites, Anasarca	1	...	...	...	...	...	...	...	...	...	...	1	...	...
our	17	...	...	...	...	...	1	3	...	4	6	2	1	...
ss	1	...	...	...	...	...	...	...	1	...	...	...	...	...
orrhage	...	...	...	...	...	...	...	...	...	...	...	...	..	...
en (cause unascertained)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ill-defined	1	1	...	...	...	...	...	...	...	...	...	...	...	...
E.—Violent Deaths.														
CCIDENT.														
ines and Quarries	2	...	...	...	...	...	...	1	1	...	...	...	...	...
ehicles { On Railways	5	...	...	...	...	...	...	3	1	...	1	...	...	...
ehicles { In Streets	100	...	8	9	3	3	6	11	9	11	18	14	7	1
, Boats, Docks (not rowning)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ing Operations	...	...	...	...	...	...	...	...	...	...	...	...	...	...
inery	4	...	...	...	1	...	...	...	...	3	...	...	...	...
ons and Implements	...	...	...	...	...	...	...	...	...	...	...	...	...	...
s and Scalds	32	1	12	2	1	...	...	3	2	3	1	4	3	...
n, Poisonous Vapours	3	...	...	...	...	...	2	...	...	...	1	...	...	...
ning	15	...	...	3	1	1	...	1	2	2	3	2	...	...
cation	11	9	...	...	...	...	...	2	...	...	...	...	...	...
	68	...	...	2	...	5	3	7	3	7	15	10	12	4
her Agencies	...	...	...	...	...	...	...	...	...	...	...	...	...	...
rwise or not Stated	9	...	1	1	1	2	...	1	1	...	2	...	...	...
OMICIDE.	8	1	1	2	...	...	1	2	1	...	...	...	...	...
JICIDE.	92	...	...	...	...	5	5	7	19	34	13	7	2	...
KECUTION.	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE B.—MANCHESTER, 1931.

Causes of Deaths at Different Life Periods—MALES.

Classes	CAUSES OF DEATH	All Ages Total	Ages at Death—in years: Under 5 Years 0 to 1	Under 5 Years 1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and
	All Causes	5451	624	270	79	43	95	110	272	429	710	1059	1119	559	8
A	Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	36	8	25	3	...	...	...	...	...	..	...	...	...	..
	Scarlet Fever	4	1	1	1	...	...	...	...	1	...	...	...	...	..
	Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Whooping Cough	41	19	21		..	...	...	...	...	...	...	...	...	..
	Diphtheria	31	3	9	17	2	...	...	...	...	...	...	...	...	..
	Ill-defined Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Enteric Fever	1	...	...	...	...	1	..	...	...	..	...	...	...	..
	Influenza	142	3	4	2	1	5	1	16	21	26	27	26	8	2
	Epidemic Diarrhœa	4	4	...	...	...	...	...	...	...	...	...	...	...	...
	Diarrhœa, Dysentery, Simple Cholera	87	80	5	...	...	...	...	...	1	...	...	...	1	
	Venereal Affections	26	...	...	...	...	1	1	1	...	9	7	6	1	...
	Erysipelas	14	2	1	...	...	...	...	...	...	1	5	3	2	...
	Pyæmia, Septicæmia (Others)	15	3	1	1	1	4	...	1	1	2	...	...	1	...
	Other Zymotics	37	14	...	1	1	3	4	3	3	3	3	2	...	...
	Tuberc. Periton: Tabes Mes:	11	...	3	..	1	1	1	1	1	2	...	1	...	
	Tubercular Meningitis	34	4	19	3	1	3	...	3	1	...	...	...	...	...
	Phthisis	519	2	2	2	3	24	45	93	102	129	89	26	2	...
	Tuberculous Dis. (Other)	18	...	2	1	2	1	...	3	3	...	4	2	...	...
	Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Alcoholism	4	...	...	...	...	...	...	...	1	...	1	2	...	...
	Rheumatic Fever	36	...	...	3	3	5	1	5	4	2	6	6	1	...
	Cancer	625	...	...	1	...	...	1	9	27	83	221	209	70	4
	Premature Birth..	128	127	1	...	...	...	..	...	...	...	...	...	...	...
	Congenital Defects	46	39	3	2	1	1	...	...	...	...	...	...	...	...
	Atelectasis	15	15	...	...	...	...	...	...	...	...	...	...	..	...
	Epilepsy	20	1	...	1	1	1	1	2	6	1	4	2	...	...
	Convulsions	21	16	5	...	...	...	...	..	...	...	...	...	...	...
	Nervous Syst: (Other)	152	8	2	3	1	4	6	14	28	30	31	16	9	...
	Cereb: Hæm: Apoplexy, Hemip:	225	3	...	...	...	...	...	1	4	21	58	91	45	2
	Heart and Blood Vessel Dis:	1003	2	5	2	1	7	8	18	53	106	236	339	199	27
B and C	Pleurisy	10	...	2	2	...	...	...	1	1	3	...	1	...	...
	Bronchitis	434	35	12	...	3	3	1	6	25	60	106	108	60	15
	Pneumonia Lobar-Croupous	253	17	23	5	...	3	7	22	47	54	43	27	5	...
	Pneumonia Broncho-Lobular	310	100	81	4	..	3	2	9	11	24	32	28	14	2
	"Pneumonia"	13	1	2	1	...	...	...	1	2	1	3	2	...	...
	Respiratory Dis: (Other)	58	2	1	1	..	...	1	2	6	19	13	6	6	1
	Cirrhosis	20	...	...	...	...	...	...	...	1	5	9	5	...	...
	Digestive Syst: (Other)	173	17	9	6	5	3	8	13	20	29	31	21	8	3
	Urinary Syst: (Other)	218	...	1	...	2	2	6	4	23	32	56	55	32	5
	Generative Organs	...	...	...	...	...	...	...	...	...	...	...	...	...	..
	Other specified Diseases	216	58	17	5	9	8	3	14	6	22	24	38	12	...
D	Marasmus and Atrophy	33	33	...	...	...	...	..	...	...	...	...	...	...	...
	Old Age	175	...	...	...	...	...	...	...	...	1	6	79	69	20
	Other Ill-defined Causes	16	1	...	...	...	...	1	2	1	4	5	1	1	...
E	Violence	160	5	12	11	5	9	10	23	13	16	30	13	12	1
	Homicide	3	1	1	...	...	...	...	...	1	...	...	...	...	...
	Suicide	64	...	...	...	...	3	2	5	15	25	9	4	1	..
	Execution	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE C.—MANCHESTER, 1931.

Causes of Deaths at Different Life Periods—FEMALES.

Classes	CAUSES OF DEATH	All Ages Total	Ages at Death—in years: Under 5 Years 0 to 1	Under 5 Years 1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
	All Causes	5167	403	233	69	46	103	130	262	305	516	859	1219	832	190
	Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	29	3	24	2	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever	4	...	4	..	...	...	...	...	...	...	...	...	...	...
	Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Whooping Cough	45	9	33	2	...	...	...	...	...	...	1	...	...	...
	Diphtheria	29	3	7	15	2	...	1	...	1	...	...	...	...	..
	Ill-defined Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Enteric Fever	3	...	...	...	...	...	...	...	1	1	1	...	...	...
	Influenza	198	9	5	...	4	7	4	10	16	29	32	45	32	5
	Epidemic Diarrhœa	1	1	...	...	...	...	..	...	...	...	...	...	...	..
	Diarrhœa, Dysentery, Simple Cholera	59	48	10	...	...	...	...	...	...	1	...	...	...	...
	Venereal Affections	6	...	1	...	...	1	...	...	1	1	1	1	...	...
	Erysipelas	14	2	...	...	...	...	1	...	...	1	2	7	1	...
	Pyæmia, Septicæmia (Others)	20	2	...	...	2	...	...	4	3	1	8	...	...	...
A	Puerperal Fever	15	...	...	...	...	...	6	6	3	...	...	...	...	...
	Other Zymotics	27	7	...	...	1	3	5	3	2	3	3	...	...	...
	Tubercular Periton : Tabes Mes.	13	...	4	...	...	5	...	3	1	...	...	...	...	...
	Tubercular Meningitis	40	5	15	6	5	3	...	4	...	2	...	...	...	...
	Phthisis	336	1	2	4	7	43	66	102	49	37	20	5	...	...
	Tuberculous Diseases (Other)	16	1	...	1	...	3	1	2	3	1	2	2	...	...
	Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Alcoholism	5	...	...	...	...	...	...	...	...	3	1	1	...	...
	Rheumatic Fever	46	...	...	4	8	4	2	3	7	6	10	2	...	...
	Cancer	615	...	...	...	...	3	3	9	51	116	170	190	66	7
	Premature Birth	103	103	...	...	...	...	...	...	...	...	...	...	...	...
	Congenital defects	39	34	3	1	...	1	...	...	...	...	...	...	...	...
	Atelectasis	10	10	...	...	...	...	...	...	...	...	...	...	...	...
	Epilepsy	18	...	...	...	...	...	1	6	3	2	4	2	...	...
	Convulsions	13	10	3	...	...	...	...	...	...	...	...	...	...	...
	Nervous System (Other)	120	3	1	5	2	9	4	10	14	28	18	17	7	2
	Cerebral Hæmorrhage, Apoplexy, and Hemiplegia	267	...	...	...	...	...	...	2	8	23	73	98	54	9
	Heart and Blood Vessel Diseases	1180	2	...	4	2	5	6	13	41	98	218	407	303	81
B	Pleurisy	6	...	1	1	...	...	1	1	1	...	...	1	...	...
and	Bronchitis	432	37	11	...	...	2	...	3	10	18	66	139	124	22
C	Pneumonia Lobar-Croupous	177	9	22	5	4	4	5	18	17	22	31	24	16	...
	Pneumonia Broncho-Lobular	247	63	57	1	...	...	2	11	10	19	23	36	23	2
	"Pneumonia"	10	1	...	...	...	...	...	2	2	2	2	...	..	1
	Respiratory Diseases (Other)	33	...	1	...	...	...	...	1	7	4	5	7	8	...
	Cirrhosis	7	...	...	...	...	...	...	1	1	1	1	2	1	...
	Digestive System (Other)	137	4	8	4	3	2	1	4	5	20	32	30	23	1
	Urinary System (Other)	168	...	2	1	...	1	4	8	15	20	43	48	23	3
	Generative Organs and Childbirth	48	...	...	...	...	...	5	16	11	9	3	2	1	1
	Other specified Diseases	253	19	10	5	4	3	7	9	12	29	64	66	21	4
D	Marasmus and Atrophy	12	12	...	...	...	...	...	...	...	...	...	...	...	...
	Old Age	241	...	...	...	...	...	...	...	...	...	9	66	118	48
	Other Ill-defined Causes	3	...	...	...	...	...	...	1		...	1	1	...	...
E	Violence	89	5	9	6	2	2	1	6	6	10	11	17	10	4
	Homicide	5	...	...	2	...	...	1	2	...	...	...	...	...	...
	Suicide	28	...	...	...	...	2	3	2	4	9	4	3	1	...

TABLE D.

Manchester, 1931.—Causes of Death in Infancy and Childhood.

Causes of Death	Under One Year			Total under One Year	One and under Five Years				Total under Five Years
	Under 3 months	3–6 months	6–12 months		1–	2–	3–	4–	
All Causes	620	163	244	1,027	280	105	76	42	1,530
Chicken Pox	...	...	1	1	...	...	...	...	1
Measles	2	5	4	11	28	11	8	2	60
Scarlatina	...	...	1	1	...	3	1	1	6
Whooping Cough	6	6	16	28	36	5	9	4	82
Diphtheria	2	...	4	6	1	7	6	2	22
Erysipelas	...	2	2	4	1	...	...	...	5
Diarrhœal Diseases	74	28	31	133	13	1	...	1	148
Gastritis	...	...	...	...	...	...	...	...	...
Syphilis	7	1	...	8	1	...	...	...	9
Tabes Mesenterica and Tuberc. Peritonitis	...	...	...	...	4	2	1	...	7
Tubercular Meningitis	1	...	8	9	14	10	8	2	43
Tuberculosis (Other)	2	1	1	4	5	1	...	...	10
Rickets	...	...	1	1	5	1	...	...	7
Premature Birth	219	10	1	230	1	...	...	...	231
Injury at Birth	40	...	...	40	...	...	...	...	40
Atelectasis	25	...	...	25	...	...	..	...	25
Congenital Malformations	61	7	5	73	3	2	1	...	79
Convulsions	15	5	6	26	3	2	3	...	34
Meningitis	1	3	4	8	...	...	1	1	10
Nervous Diseases (Other)	3	1	...	4	...	...	1	...	5
Bronchitis	32	20	20	72	16	4	2	1	95
Pneumonia	40	47	104	191	119	41	18	7	376
Other Respiratory Diseases	1	...	1	2	1	...	1	3	7
Atrophy, Marasmus	31	10	4	45	...	...	...	...	45
Found Dead in Bed (overlaid)	4	1	...	5	...	...	...	...	5
Suffocation	...	2	2	4	...	...	...	...	4
Violence (Other forms)	1	...	1	2	7	4	4	7	24
Ill-defined Causes	1	...	...	1	...	..	...	...	1
Unclassified	52	14	27	93	22	11	12	11	149

PUBLIC INSTITUTIONS; ALSO QUINQUENNIAL AVERAGES 1871-1931.

	Year	Estimated Population (Mean)	Persons Married	Annual Rates per 1,000 persons living: Births	Deaths (all causes)	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Typhus Fever	Enteric Fever	Simple Continued Fever	Diarrhœal Diseases	Violence	Percentage to Total Deaths: Inquest Cases	Deaths in Public Institutions	Infantile Mortality	Year
Quinquennial Average	1871–1875	477,344	24·6	38·9	28·3	0·26	0·64	1·08	0·08	0·78	0·14	0·43	0·21	1·95	0·94	7·2	13·4	198	.. 1871–1875
	1876–1880	509,802	18·6	38·7	26·2	0·24	0·53	1·07	0·13	0·84	0·08	0·29	0·11	1·26	0·89	7·5	14·3	172	.. 1876–1880
	1881–1885	542,746	17·9	35·1	23·6	0·04	0·71	0·48	0·10	0·68	0·05	0·20	0·03	0·99	0·72	7·0	15·9	175	.. 1881–1885
	1886–1890	575,630	16·6	33·4	24·6	0·02	0·83	0·50	0·32	0·54	0·02	0·30	0·01	1·08	0·78	6·9	17·7	183	.. 1886–1890
	1891–1895	517,801	16·9	33·2	23·6	0·03	0·62	0·26	0·27	0·64	0·00	0·24	0·01	1·19	0·77	7·1	19·2	186	. 1891–1895
	1896–1900	539,599	18·2	32·5	22·7	..	0·89	0·20	0·13	0·53	0·00	0·18	0·01	1·69	0·73	7·1	20·2	192	.. 1896–1900
	1901–1905	554,355	17·4	30·9	20·1	0·01	0·55	0·19	0·22	0·41	0·00	0·13	0·00	1·15	0·72	7·1	24·4	173	.. 1901–1905
	1906–1910	660,049	17·0	28·1	17·7	..	0·54	0·16	0·17	0·37	0·00	0·10	0·00	0·76	0·68	7·4	27·3	147	.. 1906–1910
	1911–1915	731,677	17·6	24·8	16·4	..	0·50	0·12	0·14	0·25	..	0·05	..	0·84	0·67	7·9	30·8	133	. 1911–1915
	1916–1920	770,330	16·7	19·2	14·1	..	0·24	0·04	0·08	0·21	..	0·02	0·00	0·30	0·49	6·4	32·3	105	.. 1916–1920
	1921–1925	751,288	15·8	20·6	13·9	..	0·25	0·06	0·10	0·20	..	0·01	..	0·33	0·44	5·7	37·8	95	.. 1921–1925
	1926–1930	759,570	17·3	17·4	13·8	..	0·18	0·02	0·11	0·14	..	0·01	..	0·24	0·46	4·8	42·9	88	.. 1926–1930
	1926..	755,083	16·1	18·5	13·3	..	0·20	0·03	0·14	0·08	..	0·01	..	0·31	0·41	5·8	39·2	87	 1926
	1927.. .. .	757,319	17·7	17·2	13·9	..	0·21	0·03	0·12	0·16	..	0·00	..	0·20	0·43	5·0	42·0	86	 1927
	1928..	759,563	17·1	17·0	13·1	..	0·16	0·02	0·13	0·12	..	0·01	..	0·26	0·45	4·7	43·5	91	 1928
	1929..	761,813	18·0	17·1	15·5	0·00	0·08	0·01	0·07	0·29	..	0·01	..	0·24	0·49	3·3	43·2	97	 1929
	1930..	764,070	17·4	17·1	13·1	..	0·23	0·02	0·07	0·05	..	0·01	..	0·19	0·50	5·1	46·7	79	 1930
	1931..	766,333	16·2	15·9	13·9	..	0·08	0·01	0·08	0·11	..	0·01	..	0·20	0·46	4·6	46·8	84	 1931

The populations and rates prior to 1891 are those for the Unions of Manchester, Chorlton, and Prestwich, which have been taken as approximately representing "Manchester." The City was extended to include Moss Side and Withington in November, 1904, Gorton and Levenshulme in November, 1909, and Wythenshawe, April, 1931.

Table F.

Manchester—Annual Rates of Mortality from certain causes of Death.

Year	Annual rates per 1,000 persons living										Rates per 1,000 births	
	Cancer	Tuberc. Peritonitis Tabes Mes.	Phthisis	Other Tuberc. Diseases	Diseases of Nervous System	Diseases of Heart and Blood Vessels	Diseases of Respiratory System	Diseases of Digestive System	Diseases of Urinary System	Diseases of Generative System	Puerperal Fever	Childbirth
1881-1885 ..	0·50	0·35	2·42	0·57	3·28	1·37	5·41	1·23	0·48	0·08	3·03	1·
1886-1890 ..	0·64	0·36	2·24	0·59	3·09	1·73	5·76	1·23	0·61	0·08	3·22	2·
1891-1895 ..	0·62	0·22	2·09	0·75	1·74	2·53	5·56	1·07	0·52	0·07	2·75	3·
1896-1900 ..	0·73	0·19	2·04	0·63	1·32	2·54	5·03	1·04	0·49	0·09	1·55	1·
1901-1905 ..	0·80	0·16	1·94	0·55	1·17	2·56	4·29	0·95	0·49	0·08	1·21	1·
1906-1910 ..	0·88	0·14	1·65	0·45	0·95	2·56	3·75	0·84	0·54	0·07	1·28	1·
1911-1915 ..	1·01	0·12	1·59	0·38	0·79	2·34	3·45	0·68	0·56	0·09	1·24	2·
1916-1920 ..	1·08	0·09	1·39	0·28	0·54	2·27	2·98	0·51	0·47	0·06	1·58	1·
1921-1925 ..	1·34	0·06	1·26	0·24	0·51	2·58	3·03	0·47	0·46	0·07	1·54	2·
1926-1930 ..	1·45	0·03	1·16	0·19	0·48	3·05	2·66	0·45	0·50	0·07	1·74	2·
1926	1·44	0·03	1·19	0·19	0·49	2·74	2·61	0·46	0·47	0·08	1·79	2·
1927	1·42	0·03	1·15	0·20	0·48	2·95	2·93	0·42	0·47	0·08	1·60	3·
1928	1·44	0·04	1·10	0·15	0·50	2·94	2·42	0·46	0·55	0·06	1·78	2·
1929	1·47	0·03	1·21	0·17	0·50	3·46	3·24	0·45	0·49	0·06	1·46	2·
1930	1·47	0·03	1·15	0·22	0·45	3·14	2·10	0·45	0·54	0·06	2·07	2·
1931	1·62	0·03	1·12	0·14	0·45	3·49	2·59	0·44	0·50	0·06	1·22	2·

See footnotes to Table E.

TABLE G, 1931.—Population, Area, Density. Total Births and Deaths, with Birth and Death Rates.

[Institution Populations, Births and Deaths, distributed.]

WARDS	Estimated Population	Area in Acres	Persons to an Acre	BIRTHS		DEATHS		Natural Rate of Increase
				Total	Rate per 1,000	Total	Rate per 1,000	
City	**766,333**	**27,257**	**28**	**12,250**	**15·98**	**10,618**	**13·86**	**2·12**
All Saints	23,194	300	77	448	19·32	385	16·60	2·72
Ardwick	26,230	426	61	535	20·40	434	16·55	3·85
Beswick	29,098	254	115	509	17·49	377	12·96	4·53
Blackley	20,222	1,158	17	258	12·76	238	11·77	0·99
Bradford	26,231	790	33	437	16·66	328	12·50	4·16
Cheetham	23,769	555	43	331	13·93	290	12·20	1·73
Chorlton-cum-Hardy	42,872	1,666	26	467	10·89	419	9·77	1·12
Collegiate Church	17,620	446	39	266	15·10	282	16·00	— 0·90
Collyhurst	24,334	231	105	476	19·56	374	15·37	4·19
Crumpsall	15,757	2,203	7	231	14·66	204	12·95	1·71
Didsbury	23,661	2,357	10	327	13·82	234	9·89	3·93
Exchange	367	61	6	2	5·45	5	13·62	— 8·17
Gorton North	22,959	604	38	279	12·15	324	14·11	— 1·96
Gorton South	28,143	628	45	427	15·17	317	11·26	3·91
Harpurhey	22,342	342	65	344	15·40	304	13·61	1·79
Levenshulme	20,253	606	33	226	11·16	220	10·86	0·30
Longsight	22,706	593	38	259	11·41	278	12·24	— 0·83
Medlock Street	28,795	212	135	567	19·69	478	16·60	3·09
Miles Platting	25,049	313	80	492	19·64	365	14·57	5·07
Moston	23,583	1,231	19	306	12·98	262	11·11	1·87
Moss Side East	20,554	241	85	363	17·66	316	15·37	2·29
Moss Side West	20,911	267	78	237	11·33	318	15·21	— 3·88
New Cross	27,271	303	90	601	22·04	558	20·46	1·58
Newton Heath	20,485	1,007	20	305	14·89	279	13·62	1·27
Openshaw	23,690	482	49	405	17·10	336	14·18	2·92
Oxford	824	167	5	7	8·50	28	33·98	— 25·48
Rusholme	21,865	806	27	313	14·31	265	12·12	2·19
St. Ann's	240	55	4	1	4·17	3	12·50	— 8·33
St. Clement's	6,428	181	36	133	20·69	99	15·40	5·29
St. George's	27,209	266	102	533	19·59	503	18·49	1·10
St John's	4,992	199	25	90	18·03	112	22·44	— 4·41
St. Luke's	27,860	316	88	503	18·05	477	17·12	0·93
St. Mark's	24,985	340	73	420	16·81	370	14·81	2·00
St. Michael's	19,638	243	81	427	21·74	380	19·35	2·39
Withington	45,337	1,841	25	628	13·85	384	8·47	5·38
Wythenshawe	6,859	5,567	1	97	14·14	72	10·50	3·64

TABLE H, 1931.

BIRTHS REGISTERED IN THE CITY OF MANCHESTER, IN WARDS, AND DISTINGUISHING LEGITIMATE AND ILLEGITIMATE BIRTHS; ALSO THE PROPORTION OF MORTALITY AMONG INFANTS OF BOTH CLASSES UNDER ONE YEAR OF AGE.

WARDS	BIRTHS		Percentage of Illegitimate Births to Total Births	DEATHS UNDER 1 YEAR		PROPORTION OF DEATHS UNDER 1 YEAR PER 1,000 BIRTHS		
	Total	Illegitimate		Total	Of Illegitimate Children	Total	Legitimate	Illegitimate
City	**12,250**	**579**	**4·7**	**1,027**	**76**	**84**	**81**	**131**
All Saints	448	57	12·7	37	6	82	79	105
Ardwick	535	35	6·5	64	9	120	110	257
Beswick	509	13	2·6	37	2	73	71	154
Blackley	258	9	3·5	20	...	78	80	...
Bradford	437	13	2·9	44	1	101	101	77
Cheetham	331	13	3·9	19	...	57	60	...
Chorlton-cum-Hardy	467	15	3·2	24	2	52	49	133
Collegiate Church	266	19	7·2	38	3	143	142	160
Collyhurst	476	19	4·0	57	5	120	111	263
Crumpsall	231	8	3·5	18	1	78	76	125
Didsbury	327	12	3·7	16	...	49	51	...
Exchange	2	...	...	...	...	...	...	...
Gorton North	279	8	2·9	17	1	61	59	125
Gorton South	427	22	5·1	29	2	68	67	91
Harpurhey	344	15	4·4	27	2	78	76	133
Levenshulme	226	1	0·4	10	...	44	44	...
Longsight	259	17	6·5	14	1	54	54	59
Medlock Street	567	34	6·0	56	4	99	97	117
Miles Platting	492	7	1·4	42	...	85	87	...
Moston	306	7	2·3	27	...	88	90	...
Moss Side East	363	29	8·0	25	2	69	69	69
Moss Side West	237	12	5·1	21	...	89	93	...
New Cross	601	31	5·2	73	8	121	114	258
Newton Heath	305	13	4·3	23	2	75	72	154
Openshaw	405	14	3·5	29	...	72	74	...
Oxford	7	...	...	2	...	286	286	...
Rusholme	313	14	4·5	16	...	51	53	...
St. Ann's	1	...	...	...	...	...	...	...
St. Clement's	133	3	2·3	16	...	120	123	...
St. George's	533	21	3·9	46	3	86	84	143
St. John's	90	10	11·1	9	2	100	88	200
St. Luke's	503	54	10·7	45	12	89	74	222
St. Mark's	420	21	5·0	38	5	91	83	238
St. Michael's	427	20	4·7	40	1	94	96	50
Withington	628	11	1·8	41	2	65	63	182
Wythenshawe	97	2	2·1	7	...	72	74	...

TABLE I, 1931.

MANCHESTER.—Certification of the Causes of Death in the City and in the various Wards.

WARDS	Total Deaths	Certified by		Not Certified	Proportion per cent. of Deaths		
					Certified by		
		Registered Medical Practitioners	Inquest		Regist'd Medical Practitioners	Inquest	Not Certified
City	**10,618**	**10,037**	**483**	**98**	**94·5**	**4·6**	**0·9**
All Saints	385	352	26	7	91·4	6·8	1·8
Ardwick	434	416	14	4	95·9	3·2	0·9
Beswick	377	364	9	4	96·6	2·3	1·1
Blackley	238	229	7	2	96·2	3·0	0·8
Bradford	328	317	11	...	96·6	3·4	...
Cheetham	290	282	5	3	97·3	1·7	1·0
Chorlton-cum-Hardy	419	386	29	4	92·1	7·0	0·9
Collegiate Church	282	262	13	7	92·9	4·6	2·5
Collyhurst	374	361	11	2	96·5	3·0	0·5
Crumpsall	204	195	8	1	95·6	3·9	0·5
Didsbury	234	222	8	4	94·9	3·4	1·7
Exchange	5	4	1	...	80·0	20.0	...
Gorton North	324	304	20	...	93·8	6·2	. .
Gorton South	317	301	15	1	95·0	4 7	0·3
Harpurhey	304	288	12	4	94·7	4·0	1·3
Levenshulme	220	206	9	5	93·6	4·1	2·3
Longsight	278	267	9	2	96·0	3·3	0·7
Medlock Street	478	447	26	5	93·5	5·4	1·1
Miles Platting	365	351	14	...	96·2	3·8	...
Moston	262	257	5	...	98·1	1·9	...
Moss Side East	316	290	22	4	91·8	6·9	1·3
Moss Side West	318	304	12	2	95·6	3·8	0·6
New Cross	558	533	22	3	95·5	4·0	0·5
Newton Heath	279	262	13	4	93·9	4·7	1·4
Openshaw	336	319	14	3	94·9	4·2	0·9
Oxford	28	27	...	1	96·4	...	3·6
Rusholme	265	250	12	3	94·4	4·5	1·1
St. Ann's	3	2	1	...	66·7	33·3	...
St. Clement's	99	95	2	2	95 8	2·1	2·1
St. George's	503	471	30	2	93·6	6·0	0·4
St. John's	112	102	8	2	91·1	7·1	1·8
St. Luke's	477	448	23	6	93·9	4·8	1·3
St. Mark's	370	344	23	3	93·0	6·2	0·8
St. Michael's	380	359	17	4	94·5	4·4	1·1
Withington	384	354	26	4	92·2	6·8	1·0
Wythenshawe	72	66	6	...	91·7	8·3	...

NOTIFIABLE INFECTIOUS DISEASES OTHER THAN WHOOPING COUGH AND TUBERCULOSIS.

The diseases included in the Infectious Disease (Notification) Acts, 1889 and 1899, or regulations under the Public Health Acts, are as follows:—Smallpox, Chickenpox, Scarlet Fever, Diphtheria, Typhus Fever, Enteric or Typhoid Fever, Relapsing Fever, Continued Fever, Puerperal Fever, Puerperal Pyrexia, Erysipelas, Ophthalmia Neonatorum, Cerebro-Spinal Fever, Poliomyelitis, Polio-Encephalitis and Encephalitis-Lethargica, Malaria, Dysentery, Acute Primary Pneumonia, Acute Influenzal Pneumonia, Measles, Rubella, and Pemphigus Neonatorum. The following cases were notified in 1931, and the numbers are compared with the average of the previous ten years:—

	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	Mean	1931
Smallpox	..	4	..	..	..	2	36	68	8	2	20	..
Chickenpox	2,443	2,860	3,354	3,574	4,105	5,783	3,823	3,777	3,510	3,299	3,653	4,792
Scarlet Fever	5,400	3,618	1,814	1,784	2,869	2,259	1,823	2,100	2,318	3,701	2,769	2,913
Diphtheria	1,002	806	536	570	1,040	1,145	1,208	1,033	761	838	894	573
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	74	36	50	103	65	30	18	32	41	33	48	24
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	138	130	130	115	179	174	107	133	144	156	141	139
Puerperal Pyrexia	..	..	..	..	..	32	102	66	80	88	36	80
Erysipelas	385	379	294	284	412	378	358	428	441	501	386	399
Ophthalmia Neonatorum	227	263	227	336	266	218	192	192	137	144	220	119
Cerebro-Spinal Fever	3	8	3	11	9	12	9	9	17	22	10	38
Poliomyelitis	7	7	4	7	12	12	12	8	4	3	8	4
Polio-Encephalitis	..	..	..	1	4	2	..	2	2	..	1	..
Encephalitis-Lethargica	31	9	36	244	78	91	65	50	37	23	66	24
Malaria	38	19	16	3	4	1	3	15	14	1	11	1
Dysentery	8	3	2	2	1	2	2	13	4	17	5	6
Primary Pneumonia	1,578	2,268	2,067	2,203	2,200	1,876	2,260	2,176	2,265	2,059	2,095	2,005
Influenzal Pneumonia	218	487	426	447	351	313	690	363	875	290	446	480
Measles	1,135	19,614	3,481	18,349	7,941	10,953	13,987	7,141	9,512	10,738	10,285	7,771
Rubella	453	177	94	224	2,107	1,128	407	1,498	499	237	682	2,553
Pemphigus Neonatorum	..	..	..	..	83	128	116	106	87	112	63	64
	13,140	30,688	12,534	28,257	21,726	24,539	25,218	19,210	20,756	22,264	21,839	15,985

In 1900 Erysipelas was made notifiable, in 1910 Ophthalmia Neonatorum, in 1912 Cerebro-Spinal Fever and Poliomyelitis. Measles and Rubella were made notifiable in 1916, and Polio-Encephalitis, Encephalitis-Lethargica, Malaria, Dysentery, Primary Pneumonia, Influenzal Pneumonia in 1919.

From 1919 (September) Chickenpox has been notifiable, and in 1925 (September) Pemphigus Neonatorum was made notifiable.

Puerperal Pyrexia was made notifiable on October 1st, 1926.

CHICKENPOX.

Chickenpox was made a notifiable disease on September 15th, 1919, for six months, and its notifiability has been renewed from time to time since that date.

CHICKENPOX.—NUMBER OF ATTACKS AT DIFFERENT AGES DURING 1931.

Under 1 year	180
1—2 years	280
2—3 „	340
3—4 „	408
4—5 „	562
5—9 „	2,671
10–14 „	276
15—19 „	40
20—24 „	18
25—44 „	14
45— „	3
TOTAL	4,792

The deaths from the more common diseases are shown in the following figures :—

Years	Measles	Scarlet Fever	Diphtheria	Enteric Fever	Influenza	Whooping Cough	Diarrhœa	Phthisis
1921–30 Average	159	33	79	8	316	131	212	921
1931	65	8	60	4	340	86	148	855

Consultations.—Seventy-seven consultation visits were made during the year by Medical Officers of the Department at the request of medical practitioners in the City in connection with the diagnosis of cases of infectious disease in which the nature of the illness was in doubt.

SMALLPOX.

No cases of smallpox occurred in the City in 1931.

SCARLET FEVER.

The following figures show the course of the disease in quarters :—

TABLE I.—SCARLET FEVER.—ATTACKS IN QUARTERS ACCORDING TO DATE OF RASH.

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
1926 .	487	450	639	683	2259
1927 .	362	397	441	623	1823
1928 ..	519	483	488	610	2100
1929 ..	442	428	608	840	2318
1930 ..	775	738	885	1303	3701
5 years Mean	517	499	612	812	2440
1931 ..	889	729	612	683	2913

TABLE 2.—1931.—SCARLET FEVER ATTACKS IN WARDS, WITH ATTACK RATE, CASE FATALITY PER CENT., AND REMOVALS TO HOSPITAL PER CENT.

WARDS	ATTACKS	ATTACK RATE PER 1,000 LIVING	† CASE FATALITY PER CENT.	REMOVALS TO HOSPITAL PER CENT.
City	**2,913**	**3·8**	**0·3**	**79·1**
All Saints	66	2·8	—	83·3
Ardwick	124	4·7	—	91·1
Beswick	135	4·6	—	91·1
Blackley	133	6·6	—	73·7
Bradford	91	3·5	—	85·7
Cheetham	61	2·6	1·6	73·8
Chorlton-cum-Hardy..	119	2·8	0·8	51·3
Collegiate Church ..	40	2·3	—	95·0
Collyhurst	64	2·6	—	87·5
Crumpsall	51	3·2	2·0	64·7
Didsbury	94	4·0	1·0	74·5
Exchange	1	2·7	—	100·0
Gorton North	60	2·6	—	71·7
Gorton South	96	3·4	1·0	90·6
Harpurhey	93	4·2	—	72·0
Levenshulme	66	3·3	1·5	63·6
Longsight	72	3·2	—	75·0
Medlock Street	155	5·4	—	84·5
Miles Platting	138	5·5	0·7	87·0
Moston	200	8·5	—	71·5
Moss Side East	84	4·1	1·2	71·4
Moss Side West.. ..	37	1·2	—	73·0
New Cross	93	3·4	1·0	83·9
Newton Heath	88	4·3	—	81·8
Openshaw	104	4·4	—	83·7
Oxford	6	7·3	—	100·0
Rusholme	56	2·6	—	75·0
St. Ann's	1	4·2	—	100·0
St. Clement's	25	3·9	—	96·0
St. George's	101	3·7	—	88·1
St. John's	20	4·0	—	75·0
St. Luke's	61	2·2	—	85·2
St. Mark's	95	3·8	—	86·3
St. Michael's	65	3·3	—	93·8
Withington..	196	4·3	0·5	66·8
Wythenshawe	22	3·2	—	90·9

† Corrected ; the fatal cases are those actually occurring amongst the cases notified.

TABLE 3.—SCARLET FEVER.—NUMBER OF ATTACKS AND OF DEATHS; ALSO THE CASE FATALITY PER CENT. AT DIFFERENT AGES FOR THE FORTY YEARS, 1891—1930 AND FOR 1931.

Ages	1891–1930			1931		
	Attacks	Deaths	Case Fatality per cent.	Attacks	Deaths	Case Fatality per cent.
Under 1 year	801	125	15·6	13	2	15·4
1 to 2 years ..	2358	313	13·3	69	1	1·4
2 to 3 „ ..	5476	498	9·1	158	3	1·9
3 to 4 „ ..	7721	542	7·0	217	1	0·5
4 to 5 „ ..	9070	464	5·1	274	1	0·3
5 to 6 „ ..	10205	298	2·9	335	—	—
6 to 7 „ ..	9432	205	2·2	287	—	—
7 to 8 „ ..	8365	142	1·7	283	—	—
8 to 9 „ ..	7042	96	1·4	243	1	0·4
9 to 10 „ ..	5847	81	1·4	208	—	—
10 to 15 „ ..	17284	178	1·0	498	—	—
15 to 20 „ ..	5467	71	1·3	135	—	—
20 to 25 „ ..	2665	42	1·6	80	—	—
25 to 35 „ ..	2505	48	1·9	65	—	—
35 to 45 „ ..	772	19	2·5	38	1	2·6
45 and over	213	7	3·3	10	—	—
All ages	95223	3129	3·3	2913	10	0·3

TABLE 4.—SCARLET FEVER MORTALITY, 1931.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1926	1927	1928	1929	1930	Mean	1931
England and Wales	0·02	0·01	0·01	0·02	0·02	**0·02**	0·01
107 Great Towns	0·02	0·01	0·02	0·02	0·02	**0·02**	0·01
London	0·02	0·01	0·02	0·02	0·02	**0·02**	0·02
Manchester City	0·03	0·03	0·02	0·01	0·02	**0·02**	0·01
159 Smaller Towns	0·02	0·01	0·01	0·02	0·01	**0·01**	0·01

SCARLET FEVER, 1931.—ATTACKS IN WEEKS, ACCORDING TO DATE OF RASH.

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Week of Year	1931	Week of Year	1931	Week of Year	1931	Week of Year	1931
1	67	14	42	27	49	40	51
2	59	15	52	28	50	41	61
3	72	16	70	29	47	42	48
4	79	17	47	30	50	43	43
5	66	18	55	31	42	44	64
6	60	19	70	32	35	45	70
7	72	20	57	33	34	46	43
8	65	21	39	34	40	47	65
9	64	22	70	35	54	48	60
10	75	23	52	36	55	49	54
11	69	24	55	37	53	50	40
12	64	25	58	38	41	51	47
13	77	26	62	39	62	52	37
Total ..	889	Total ..	729	Total ..	612	Total ..	683

City total, 1931—2,913.

SCARLET FEVER "RETURN" CASES, 1931.

Out of 2,642 discharges from Monsall Hospital, 158 gave rise to at least 158 "return" cases, a "return" case rate per cent of 6·0. In addition, 6 others contracted the disease indirectly from a returned patient.

Table showing the interval between return home of hospital patients and onset of illness in "return" cases.

Days	0–6	7–13	14–20	21–27
No. of Cases	47	59	31	21

DIPHTHERIA.

The usual tables for this disease are given below.

The following table shows the number of cases notified each year for the last ten years :—

1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
806	536	570	1,040	1,145	1,208	1,033	761	838	573

Table I.

Diphtheria, 1931.—Attacks in Weeks, according to date of onset.

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Week of Year	1931	Week of Year	1931	Week of Year	1931	Week of Year	1931
1	8	14	7	27	11	40	15
2	10	15	12	28	8	41	18
3	9	16	8	29	11	42	23
4	11	17	10	30	7	43	11
5	12	18	14	31	4	44	16
6	11	19	22	32	3	45	8
7	7	20	14	33	5	46	23
8	4	21	10	34	6	47	12
9	5	22	5	35	17	48	18
10	7	23	7	36	9	49	14
11	10	24	7	37	8	50	15
12	8	25	15	38	27	51	11
13	6	26	17	39	15	52	2
Total ..	108	Total ..	148	Total ..	131	Total ..	186

City Total, 1931—573.

The following table shows that the number of attacks is highest in children up to 10 years.

TABLE II.

DIPHTHERIA.—NUMBER OF ATTACKS, OF DEATHS, AND CASE FATALITY AT DIFFERENT AGES FOR THE FORTY YEARS, 1891-1930, AND FOR 1931.

Ages	1891-1930			1931		
	Attacks	Deaths	*Case Fatality %	Attacks	Deaths	*Case Fatality %
Under 1 year	521	288	55·3	11	5	45·5
1 to 2 years.. ..	1347	605	44·9	12	—	—
2 to 3 ,, ...	1891	562	29·7	36	6	16·7
3 to 4 ,, ...	2345	525	22·4	51	6	11·8
4 to 5 ,, ...	2541	483	19·0	49	3	6·1
5 to 6 ,, ...	2628	401	15·3	58	7	12·1
6 to 7 ,, ...	2130	248	11·6	81	13	16·1
7 to 8 ,, ...	1681	175	10·4	51	4	7·8
8 to 9 ,, ...	1344	136	10·1	38	5	13·2
9 to 10 ,, ...	1009	88	8·7	29	3	10·3
10 to 15 ,, ...	2924	132	4·5	88	3	3·4
15 to 20 ,, ...	1208	42	3·5	16	—	—
20 to 25 ,, ...	764	19	2·5	20	1	5·0
25 to 35 ,, ...	923	23	2·5	20	2	10·0
35 to 45 ,, ...	394	8	2·0	6	—	—
45 and over	194	16	8·2	7	—	—
All ages	23844	3751	15·7	573	58	10·1

* The percentages in this column are the actual proportions of fatal cases to the attacks at those ages.

The case fatality at all ages since 1911 has been as follows:—

1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
—	—	—	—	—	—	—	—	—	—
20·0	14·9	14·3	18·8	11·7	10·8	10·8	9·1	7·3	8·7

1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
—	—	—	—	—	—	—	—	—	—
9·8	9·5	9·3	8·8	8·6	8·3	8·1	7·8	6·4	10·1

Table III.

Diphtheria, 1931.—Attacks in Wards, with Attack Rate, Case Fatality per cent., and Removals to Hospital per cent.

Wards	Attacks	Deaths	Attack Rate per 1000 Living	† Case Fatality per cent.	Removals to Hospital per cent.
City	573	58	0·75	10·1	87·8
All Saints	16	1	0·69	6·2	75·0
Ardwick	16	—	0·61	—	93·7
Beswick	14	3	0·47	21·4	100·0
Blackley	18	9	0·89	50·0	94·4
Bradford	12	2	0·46	16·7	91·7
Cheetham	30	2	1·26	6·7	96·7
Chorlton-cum-Hardy ..	25	4	0·58	16·0	36·0
Collegiate Church ..	9	—	0·51	—	100·0
Collyhurst	19	—	0·78	—	100·0
Crumpsall	22	2	1·39	9·1	95·5
Didsbury	36	1	1·52	2·8	94·4
Exchange	—	—	—	—	—
Gorton North	6	1	0·26	16·7	83·3
Gorton South	16	—	0·57	—	100·0
Harpurhey	21	4	0·94	19·0	95·2
Levenshulme	6	—	0·29	—	66·6
Longsight	3	—	0·13	—	100·0
Medlock Street	23	1	0·79	4·3	100·0
Miles Platting	15	—	0·59	—	93·3
Moston	48	9	2·03	18·8	87·5
Moss Side East	12	1	0·59	8·3	100·0
Moss Side West	23	7	1·09	30·4	60·9
New Cross	27	1	0·99	3·7	96·3
Newton Heath	13	—	0·63	—	84·6
Openshaw	12	2	0·50	16·7	100·0
Oxford	1	—	1·21	—	100·0
Rusholme	22	1	1·00	4·6	59·1
St. Ann's	—	—	—	—	—
St. Clement's	5	2	0·71	40·0	100·0
St. George's	33	—	1·21	—	97·0
St. John's	6	—	1·20	—	100·0
St. Luke's	11	—	0·39	—	100·0
St. Mark's	7	—	0·28	—	85·7
St. Michael's	13	1	0·66	7·7	100·0
Withington	22	4	0·48	18·2	68·2
Wythenshawe	11	—	1·60	—	81·8

† Corrected; the fatal cases are those actually occurring amongst the cases notified.

Table IV.

Diphtheria Mortality, 1931.—Rate per 1,000 Living compared with Mean of Five Years.

	1926	1927	1928	1929	1930	Mean	1931
England and Wales	0·07	0·07	0·06	0·08	0·09	**0·07**	0·07
107 Great Towns	0·10	0·08	0·09	0·09	0·10	**0·09**	0·08
London	0·12	0·09	0·09	0·08	0·10	**0·10**	0·06
Manchester City	0·14	0·12	0·13	0·07	0·07	**0·11**	0·08
159 Smaller Towns.....	0·06	0·05	0·08	0·07	0·07	**0·07**	0·05

Examination of "Contacts."

So far as was practicable, swabs were taken from the throats and noses of members of each family under 14 years of age in which there had occurred a positive case of diphtheria.

In all, 766 persons were swabbed and 50, or 6·5 per cent., were found to be harbouring the diphtheria bacillus.

With a few exceptions these were admitted to Monsall Hospital and kept under observation until three successive swabs proved negative.

Supply of Antitoxin.

Diphtheria antitoxin (in phials containing 8,000 units concentrated) is supplied free to all medical practitioners in the City and may be obtained by them at any time during office hours from the Public Health Office, or from the following Fire Stations:—Ash Street, Harpurhey; New Street, Miles Platting; Pollard Street, Ancoats; and Upton Street, Chorlton-upon-Medlock, and all district police stations at any time during the day or night, The total quantity supplied in this manner was 3,432,000 units (or 429 phials), at a cost of £145 10s.

Diphtheria Immunisation.

The "Schick" test is a simple means of gauging the susceptibility of individuals to diphtheria infection. The knowledge thus gained enables subsequent immunisation of susceptible persons to be carried out. The value of this procedure has been proved in this and other countries. At Monsall Hospital much work has been done on these lines with successful results, and it is now the practice to test and immunise all members of the nursing staff employed at the hospital and any patients, whose parents desire it, during their convalescence from other fevers.

Community Immunisation

On June 6th, 1928, the Manchester City Council approved a scheme for the free provision of the necessary material for "Schick" testing and immunisation against diphtheria to general medical practitioners for use in their private practices, and for immunisation to be carried out at the Public Health Department, Civic Buildings, at the Maternity and Child Welfare Centres, and at schools and school clinics.

In the following table are shown the numbers dealt with during 1931 :—

Susceptibility Tests and Active Immunisation by the Public Health Department, 1931.

	Municipal Hospitals				Child Welfare Centres		Schools (1)		Public Health Office		General Practitioners		TOTALS	
	Staff		In-patients											
Schick Tests	Pos. 55	Neg. 78	Pos. 564	Neg. 2,200	Pos. 11	Neg. 0	Pos. 20	Neg. 45	Pos. 32	Neg. 21	Pos. 0	Neg. 0	Pos. 682	Neg. 2,344
Number Immunised ..	55		1,473		692		25		289		41		2,575	
Diphtheria Prophylactic Injections	165		4,106		2,045		75		818		121		7,330	

During the year ninety-two per cent. received the full course of injections, and since the inception of this scheme in 1927, 14,227 persons have been dealt with.

Virulence Tests.

The value of testing the virulence of diphtheria bacilli in certain cases lies in the fact that, in the past, harbourers of the bacillus have been kept in isolation, sometimes for long periods, irrespective of whether or not the organisms present were virulent. In cases where the test is negative the organisms are incapable of provoking disease, and isolation of the individual is unnecessary and uneconomic.

Table V. shows that during the year virulence tests were carried out in 147 cases, with 83 positive and 64 negative results.

TABLE V.

VIRULENCE TESTS, 1931.

Nature of case	Number in which diphtheria bacilli were present	Result of test	
		Virulent	Non-virulent
Diphtheria Cases	34	13	21
Diphtheria "Contacts" ..	26	14	12
Persons with Rhinitis ..	42	30	12
Other Cases..	45	26	19
Total	147	83	64

*ENTERIC FEVER.

Twenty-two persons were attacked by enteric fever in 1931 compared with 30 in 1930. Bacteriological examination proved that 17 were suffering from true typhoid fever and 5 from paratyphoid B. The cases were widespread through the City, and apart from three persons who were directly infected from an overlooked case the origin of the infections was not definitely determined. There was no evidence implicating contaminated shellfish.

154 specimens of blood were submitted by medical practitioners for examination in connection with the enteric group of diseases, 44 of which gave positive reactions. These figures include 46 specimens obtained from household contacts at the request of the Medical Officer of Health.

Table I. shows the attack and death-rates compared with those for England and Wales since 1908.

TABLE I.

INCIDENCE OF AND DEATH-RATE FROM ENTERIC FEVER IN MANCHESTER.

Number of Notified Cases, Deaths, and Death-rates per 1,000 *living from Enteric Fever in each of Twenty-four successive Years.*

YEAR	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
No. of cases notified and accepted ...	393	369	358	256	242	292	156	174	78	86	68	90
No. of deaths.	75	71	62	46	43	47	34	46	22	10	10	19
Death-rate — Manchester	0·11	0·13	0·09	0·07	0·06	0·06	0·05	0·06	0·03	0·01	0·01	0·02
Death-rate — England and Wales .	0·07	0·06	0·05	0·07	0·04	0·04	0·05	0·04	0·03	0·03	0·03	0·01

YEAR	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
No. of cases notified and accepted . .	54	74	36	50	103	65	30	18	32	41	30	22
No. of deaths	13	12	4	8	14	8	9	1	4	7	4	4
Death-rate — Manchester	0·02	0·02	0·01	0·01	0·02	0·01	0·01	0·00	0·01	0·01	0·01	0·01
Death-rate — England and Wales..	0·01	0·02	0·01	0·01	0·01	0·01	0·01	0·01	0·01	0·01	0·01	0·01

* Including typhoid and paratyphoid.

Table II. shows at what ages enteric fever appears to be most prevalent and also at what ages it is most fatal.

TABLE II.

ENTERIC FEVER.—NUMBER OF ATTACKS, OF DEATHS, AND CASE FATALITY PER CENT. AT DIFFERENT AGES FOR THE FORTY-ONE YEARS, 1891–1931.

Ages	1891–1931.		
	Attacks	Deaths	Case Fatality Per cent.
Under one year	20	9	45·0
1 to 2 years	56	8	14·3
2 „ 3 „	121	17	14·1
3 „ 4 „	174	22	12·6
4 „ 5 „	230	25	10·9
5 „ 6 „	264	28	10·6
6 „ 7 „	264	26	9·9
7 „ 8 „	246	20	8·1
8 „ 9 „	262	22	8·4
9 „ 10 „	261	26	9·9
10 „ 15 „	1497	162	10·8
15 „ 20 „	1633	294	18·0
20 „ 25 „	1589	312	19·6
25 „ 35 „	2345	541	23·1
35 „ 45 „	1153	336	29·1
45 and over	808	269	33·3
All ages	10923	2117	19·4

Table III.

Enteric Fever Attacks in Weeks reported in 1931, according to Date of Onset.

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Week of Year	1931	Week of Year	1931	Week of Year	1931	Week of Year	1931
1	1	14	—	27	1	40	1
2	—	15	2	28	—	41	—
3	1	16	—	29	—	42	1
4	—	17	—	30	1	43	—
5	—	18	1	31	—	44	—
6	—	19	—	32	1	45	—
7	—	20	1	33	1	46	—
8	—	21	—	34	1	47	1
9	—	22	1	35	—	48	2
10	1	23	—	36	—	49	3
11	—	24	—	37	—	50	—
12	—	25	—	38	—	51	—
13	—	26	—	39	1	52	—
						53	—
Total..	3	Total ..	5	Total ..	6	Total ..	8

City total, 1931—32.

TABLE IV.

ENTERIC FEVER MORTALITY, 1931—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1926	1927	1928	1929	1930	Mean	1931
England and Wales	0·01	0·01	0·01	0·01	0·01	**0·01**	0·01
London	0·01	0·01	0·01	0·01	0·01	**0·01**	0·01
CITY OF MANCHESTER ..	0·01	0·00	0·01	0·01	0·01	**0·01**	0·01

UNDULANT FEVER.

Examination of all specimens of blood submitted to the Public Health Laboratory was made for agglutination with Br. abortus with the result that in three instances positive results were obtained.

In two of these cases the blood was from persons residing outside the city, and no definite information could be obtained as to the course of the illness or of the possible sources of infection.

The third specimen was from a boy aged 9 years, and his blood agglutinated the bacillus at a titre of 1 in 640. His illness began about May 7th and pursued a course wholly compatible with a diagnosis of undulant fever. It lasted until July 7, after which there was a rapid recovery to full health.

The boy attended a private school where raw milk was provided daily for the scholars. Samples taken after delivery at the school and also from the farm at which it was produced were examined at the Public Health Laboratory, and from both samples an organism morphologically and serologically identical with Br. abortus was isolated from the glands of inoculated guinea pigs.

Veterinary examination of the herd and enquiry at the farm revealed no evidence of recent infection of the cattle. No suspicious illness of any kind had occurred among the other scholars nor in the patient's family nor among the farm hands.

It is not uncommon to find milk contaminated by Br. abortus and, in view of the rarity of undulant fever in this country, it is surmised that most people possess a natural immunity to this disease. In the case related, however, there is little doubt that the boy suffered from undulant fever, and it seems probable that the infection was conveyed to him in the milk.

CEREBRO-SPINAL FEVER.

Thirty-eight cases of cerebro-spinal fever were notified in 1931, of which 29 proved fatal. The diagnosis was confirmed in each case by the presence of the meningococcus in the cerebro-spinal fluid. The sex and age of those affected and the dates of onset of illness were as follows :—

Sex	Age	Onset	Sex	Age	Onset
F	31	February 4th	M	2	?
F	$\frac{7}{12}$	January 29th	F	16	July 17th
F	$\frac{11}{12}$	February 24th	F	$1\frac{7}{12}$	July 19th
F	$1\frac{1}{2}$	February 17th	M	$1\frac{4}{12}$	June 14th
F	2	February 25th	F	5	August 21st
M	63	?	M	$8\frac{9}{12}$	September 30th
F	$1\frac{11}{12}$	February 20th	F	23	August 23rd
M	10	March 1st	M	32	September 31st
M	$1\frac{8}{12}$	February 25th	F	$\frac{9}{52}$	September 26th
F	50	April 1st	M	$\frac{8}{12}$	October 11th
F	16	March 21st	M	2	October 26th
F	$\frac{5}{12}$	April 19th	M	$\frac{3}{12}$	November 6th
F	10	April 8th	F	49	November 3rd
M	$3\frac{8}{12}$	May 15th	M	38	November 1st
M	$\frac{6}{52}$	May 14th	M	16	November 19th
F	$\frac{7}{12}$	June 13th	M	$2\frac{8}{12}$	November 22nd
M	15	June 17th	M	6	November 26th
M	$\frac{8}{12}$	June 16th	F	$1\frac{1}{12}$	November 13th
F	$3\frac{4}{12}$	June 18th	F	$\frac{10}{12}$	December 4th

POLIOMYELITIS.

Particulars of notified cases of poliomyelitis for 1931 are given in the following table :—

ase	Sex	Age	Ward	Onset	Notified	Paralysis	Result—Jan., 1932
1	F	$4\frac{1}{2}$	Collyhurst ..	Jan. 23	Jan. 26	Arm	Recovered
2	F	$1\frac{8}{12}$	Longsight ..	June 13	June 16	Arm	Recovered
3	M	5	Openshaw ..	Sept. 16	Sept. 25	Leg	Recovered
4	M	$1\frac{10}{12}$	Collegiate	Sept. 24	Sept. 30	Legs	Recovered

ENCEPHALITIS LETHARGICA.

Thirty notifications of encephalitis lethargica were received from medical practitioners during 1931. The diagnosis was subsequently amended in six cases as follows :—cerebral hæmorrhage 2, tubercular meningitis 2, carcinoma 1, glaucoma 1.

There were, thus, 24 persons affected. In ten of these the onset of illness occurred prior to 1931.

In addition, 11 cases of chronic encephalitis lethargica were discovered of which the Department had no previous knowledge.

The disease is attended by a heavy mortality and by serious incapacitating sequelæ in many of the survivors.

The total number of deaths registered in 1931 was 25. The mortality rate among notified cases was 50·0 per cent. compared with 56·0 and 45·9 per cent. in 1930 and 1929 respectively.

Table IV. shows the number of notifications in each year since 1918, the number of deaths, the number of survivors who are wholly or partially disabled, the number of persons who have apparently completely recovered, and the number who are untraceable.

From the table it may be calculated that during the last 13 years 717 persons were notified and accepted as cases of encephalitis lethargica. 316, or 44 per cent., have died, 103, or 14 per cent., have apparently recovered completely, 37, or 5 per cent., are untraceable, and 261, or about 36 per cent., remain alive but are wholly or partially incapacitated.

Institutional accommodation for chronic sufferers is provided at the Swinton Home for children and at one or other of the municipal hospitals for adults.

Table I.

Encephalitis Lethargica.—Attacks in Age Groups, Manchester, 1931.

Years	0–5	5–10	10–20	20–30	30–40	40–50	50 and over	All ages
Males	—	1	2	2	1	1	2	9
Females	—	—	4	2	—	4	5	15
Total	—	1	6	4	1	5	7	24

Table II.

Encephalitis Lethargica.—Mortality in Age Groups amongst Notified Cases, Manchester, 1931.

Years	All Ages	0–10	10–20	20–30	30–40	40–50	50 and over
Number of Cases	24	1	6	4	1	5	7
Number of Deaths	12	—	3	2	—	1	6
Mortality Rate (per cent.) ..	50	—	50	50	—	20	85·7

Table III.

Encephalitis Lethargica.—Incidence and Mortality Rates in Age Groups.

612 Cases, 1924–1931.

Age Group	Number of Cases	Number of Deaths		Total Deaths	Mortality Rate (per cent.)
		Within a year after onset	A year or more after onset		
0— 5 years	29	21	—	21	72·4
5—10 ,,	58	15	6	21	36·2
10—15 ,,	63	12	3	15	23·6
15—20 ,,	96	21	9	30	31·2
20—35 ,,	156	23	19	42	26·9
35—45 ,,	92	28	14	42	44·4
45—65 ,,	98	41	26	67	68·5
65 and over	20	11	5	16	80·0
Total ..	612	172	82	254	41·5

TABLE IV.

Fate of Encephalitis Lethargica Patients, December, 1931.

(1) *Patients under the age of 16 at time of notification.*

Year	No. of cases notified	A	B		No. (among B) in whom changes of character have occurred	No. (among B) in whom "Parkinsonism" has supervened	C				D
		No. known to be alive and apparently well, Jan., 1929	No. suffering from sequelæ				No. of patients known to have died				No. of patients untraced or unvisited
			Interfering with schooling or other occupation	Preventing normal schooling or normal occupation			0–1 months after onset	2–6 months after onset	7–12 months after onset	Over 1 year after onset	
1919 ..	10	1	—	—	—	—	6	3	—	—	—
1920 ..	7	—	2	1	1	2	4	—	—	—	—
1921 ..	9	3	2	—	1	—	4	—	—	—	—
1922 ..	3	1	—	1	—	1	—	—	1	—	—
1923 ..	12	2	3	—	2	2	3	—	—	4	—
1924 ..	97	19	24	25	13	19	16	3	—	10	—
1925 ..	19	5	4	2	1	3	5	1	—	2	—
1926 ..	19	4	2	—	2	—	9	1	—	1	2
1927 ..	15	2	2	1	1	—	3	2	—	2	3
1928 ..	7	3	—	1	1	—	2	—	—	—	1
1929 ..	9	4	1	—	1	—	4	—	—	—	—
1930 ..	2	—	—	—	—	—	2	—	—	—	—
1931 ..	3	—	—	2	—	—	—	—	1	—	—

(2) *Patients over the age of 16 at the time of notification.*

1919 ..	—	—	—	—	—	—	—	—	—	—	—
1920 ..	12	—	2	1	—	3	5	3	—	1	—
1921 ..	22	4	5	3	2	4	6	3	1	—	—
1922 ..	6	1	1	—	—	1	—	—	2	1	1
1923 ..	24	4	4	1	2	3	9	4	—	2	—
1924 ..	147	30	21	31	2	22	18	14	3	17	13
1925 ..	59	7	7	15	2	13	7	7	2	13	1
1926 ..	72	2	8	30	1	21	10	2	1	12	—
1927 ..	50	2	8	12	—	11	10	2	1	9	6
1928 ..	43	6	7	7	—	3	6	6	2	9	—
1929 ..	28	3	5	1	—	3	5	1	1	9	3
1930 ..	21	—	—	9	—	—	2	3	1	6	—
1931 ..	21	—	5	5	—	4	5	2	1	3	—

BACTERIOLOGICAL EXAMINATIONS MADE FOR THE COUNTY BOROUGH OF MANCHESTER DURING THE YEAR 1931, PUBLIC HEALTH LABORATORY, UNIVERSITY OF MANCHESTER.

Month	Diphtheria		Typhoid	Tuberculosis				Water	
				Sputum		Milk		Bacteriological	Chemical
	Total	+	Total	Total	+	Total	+	Total	Total
January	500	28	7	246	31	146	23	—	—
February	350	27	8	240	33	106	10	—	—
March	397	40	13	264	50	133	33	—	—
April	381	31	14	254	42	120	17	—	—
May	588	62	16	237	41	103	13	—	—
June	429	33	12	206	37	117	7	—	—
July	468	37	3	185	35	135	16	—	—
August	288	22	15	153	35	113	13	—	—
September	764	56	12	152	23	112	22	—	—
October	760	64	13	216	26	120	13	—	—
November	695	48	15	211	30	84	7	—	—
December	551	37	30	206	28	50	4	—	—
Total	6171	485	158	2570	411	1339	178	—	—

Total specimens enumerated above—10,238. Other investigations 912, as under:—

Milks—Coli, etc.	475
Chemical examinations	94
Empty bottles	6
Test for abortus	2
Diphtheria, virulence tests	150
Swabs, microscopical examinations	5
Swabs, cultivation, hæmolytic streptococci, etc.	72
Urine and fæces, for tubercle bacilli	26
Urine and fæces, for typhoid group	38
Urine and fæces, for typhoid and tubercle B.	2
Urine, chemical examination	1
Cerebro-spinal fluid	6
Pleural fluid	3
Hair, for ringworm	1
Water, bacteriological examination	14
Water, chemical examination	9
Foods, for food poisoning, etc.	6
Various	2
	912

MEASLES AND GERMAN MEASLES.

Cases Notified	1931 1st quarter	2nd quarter	3rd quarter	4th quarter	Total
MEASLES—					
By Doctors	422	1,428	828	3,308	5,986
,, Others	124	498	298	865	1,785
Total	546	1,926	1,126	4,173	7,771
GERMAN MEASLES—					
By Doctors	342	1,243	383	90	2,058
,, Others	83	305	95	12	495
Total	425	1,548	478	102	2,553

The deaths from measles in successive years are shown in the following table :—

TABLE I.

DEATHS FROM MEASLES IN THE CITY OF MANCHESTER DURING THE TEN YEARS 1922-1931.

Years	Under One Year: Under 3 Months	3-5 Months	6-11 Months	Years of Age: 1–	2–	3–	4–	5 Years and upwards	Total deaths at all ages
1922	1	6	83	159	65	13	10	17	354
1923	0	2	12	46	15	3	2	3	83
1924	2	5	63	168	62	25	28	17	370
1925	2	0	25	46	24	17	9	6	129
1926	1	2	29	80	26	9	4	5	156
1927	1	5	39	65	23	14	9	8	164
1928	1	5	41	43	22	4	5	2	123
1929	0	1	17	28	4	6	2	2	60
1930	1	6	32	61	20	13	6	7	146
1931	2	5	4	28	11	8	2	5	65

Table 2.

Incidence of Measles in Manchester during the Year 1931 according to Age Groups.

Disease	Under 5 years	5 years and over	Total
Measles	4,694	3,077	7,771

Table 3.—Measles, Deaths in Quarters.

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Whole Year
1901–1910 (mean)..	80	122	68	59	329
1911–1920 (mean)..	87	125	33	32	277
1921–1930 (mean)..	51	62	26	30	159
1921	1	2	0	2	5
1922	1	162	161	30	354
1923	13	42	21	7	83
1924	39	295	34	2	370
1925	17	27	8	77	129
1926	117	36	1	2	156
1927	3	2	11	148	164
1928	101	17	5	0	123
1929	4	7	19	30	60
1930	111	27	5	3	146
1931	3	9	3	50	65

TABLE 4.—MEASLES MORTALITY RATES.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1926	1927	1928	1929	1930	Mean 5 years	1931
England and Wales	0·09	0·09	0·11	0·08	0·10	**0·09**	0·06
107 Great Towns	0·12	0·12	0·15	0·12	0·15	**0·13**	0·07
London	0·02	0·04	0·30	0·04	0·23	**0·13**	0·07
CITY OF MANCHESTER ...	0·20	0·21	0·16	0·08	0·23	**0·18**	0·08
159 Smaller Towns.....	0·07	0·07	0·08	0·06	0·08	**0·07**	0·05

WHOOPING COUGH.

The cases of this disease notified are obtained entirely through the schools, and the same disabilities attach to this mode of notification as were experienced in measles. Notwithstanding, these notifications are useful. The cases are visited and dealt with by the Health Visitors in the same manner as cases of measles.

Whooping cough notifications during 1931 :—

	First quarter	Second quarter	Third quarter	Fourth quarter	Total
1931	756	1131	680	584	3,151

TABLE I.

WHOOPING COUGH MORTALITY.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1926	1927	1928	1929	1930	Mean 5 years	1931
England and Wales	0·10	0·09	0·07	0·15	0·05	**0·09**	0·06
107 Great Towns	0·10	0·10	0·09	0·19	0·05	**0·11**	0·07
London	0·05	0·12	0·09	0·26	0·03	**0·11**	0·07
CITY OF MANCHESTER	0·08	0·16	0·12	0·29	0·05	**0·14**	0 11
159 Smaller Towns.....	0·11	0·08	0·06	0·15	0·05	**0·09**	0·05

TABLE 2.—WHOOPING COUGH, DEATHS IN QUARTERS.

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Whole Year
1911–1920 (Mean)..	59	73	24	17	173
1921–1930 (Mean)..	48	52	15	15	130
1921	40	78	31	20	169
1922	24	37	25	13	99
1923	48	113	12	11	184
1924	26	53	10	27	116
1925	89	81	23	13	206
1926	16	18	15	12	61
1927	72	35	9	8	124
1928	14	24	16	35	89
1929	142	61	9	8	220
1930	11	15	4	7	37
1931	31	15	18	22	86

TABLE 3.

INCIDENCE OF WHOOPING COUGH (KNOWN CASES) IN MANCHESTER DURING THE YEAR 1931, ACCORDING TO AGE GROUPS.

Disease	Under 5 years	5 years and over	Total
Whooping Cough	2,082	1,069	3,151

A Comparison of Mortality from Scarlet Fever, Diphtheria, Measles, and Whooping Cough.

The subjoined table shows that, as causes of death, either measles or whooping cough greatly exceed scarlet fever and diphtheria together.

Year	Whooping Cough		Measles		Scarlet Fever		Diphtheria	
	Known Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1922	2,160	99	19,659	354	3,618	55	806	79
1923	3,804	184	3,482	84	1,920	31	564	47
1924	1,706	116	18,349	370	1,784	33	570	53
1925	3,333	206	7,941	129	2,869	63	1,040	91
1926	2,094	61	10,953	156	2,259	25	1,145	103
1927	2,244	124	13,987	164	1,823	20	1,208	91
1928	3,189	89	7,141	123	2,100	14	1,033	99
1929	4,037	220	9,512	60	2,318	11	761	57
1930	1,388	37	10,738	146	3,701	16	838	53
1931	3,150	86	7,771	65	2,913	8	573	60
Total	*27,105	1,222	109,533	1,651	25,305	276	8,538	738
Manchester— Case fatality rate per cent.		4·5		1·6		1·1		8·6

* It should be pointed out that the estimated number of cases (27,105) occurring during the 10 years does not represent all the actual cases. Since this disease is not notifiable by medical practitioners, many cases escape our notice.

DIARRHŒA.

TABLE 1.—1931.—DIARRHŒA AND SIMPLE CHOLERA MORTALITY: DEATHS UNDER TWO YEARS OF AGE PER 1,000 BIRTHS, COMPARED WITH THE MEAN OF FIVE YEARS.

	1926	1927	1928	1929	1930	Mean 5 years	1931
England and Wales.....	8·7	6·3	7·0	8·1	6·0	7·2	6·0
107 Great Towns	11·8	8·3	9·6	10·9	8·3	9·8	8·4
London	11·8	7·5	10·2	10·7	9·9	10·0	9·7
CITY OF MANCHESTER	16·3	11·5	15·3	13·7	11·5	13·7	12·0
159 Smaller Towns.....	6·6	5·0	4·8	5·9	4·4	5·3	4·0

The number of deaths in successive years, and their distribution in quarters of the year, are exhibited in the following figures:—

TABLE 2.—DIARRHŒA AND SIMPLE CHOLERA DEATHS IN QUARTERS, 1922–1931.

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
First Quarter....	38	53	51	40	41	32	44	38	46	55
Second Quarter..	59	45	51	38	43	34	48	45	39	34
Third Quarter ..	44	40	46	93	60	49	42	38	26	28
Fourth Quarter..	50	64	63	56	93	36	64	58	42	31
	191	202	211	227	237	151	198	179	153	148

TABLE 3.

Third Quarter of the years	Mean Temperature	Rainfall, Inches	Humidity, per cent.	Diarrhœa and Simple Cholera Mortality. Annual Rate (third quarter) per 1,000 living
1891-1900 Mean	59°·2	9·9	76 %	4·04
1901-1910 Mean	59°·1	8·5	77 %	2·81
1911-1920 Mean	59°·4	9·6	78 %	1·32
1921-1930 Mean	60°·0	11·6	78 %	0·27
1926	61°·8	9·9	76 %	0·31
1927	59°·2	14·7	80 %	0·26
1928	59°·2	8·1	75 %	0·26
1929	61°·1	9·9	78 %	0·18
1930	59°·9	13·0	80 %	0·13
1931	58°·2	15·5	79 %	0·15

PNEUMONIA.

During 1931 the following notifications were received in respect of pneumonia :—

Primary pneumonia	Lobar	1,099	
	Lobular	901	
	Unclassified	5	
		——	2,005
Influenzal pneumonia			480
Secondary pneumonia			132
			—— 2,617

The total for the preceding year was 2,500.

In addition to the above, however, 476 deaths from pneumonia—416 primary, 54 influenzal, and 6 secondary—all being un-notified cases, were brought to our notice through the death returns; thus the total number of known pneumonia cases for the year was 3,093, as compared with 2,930 for the previous year.

In 105 cases it was impossible to obtain any definite information; these, therefore, were classified as "uninvestigated."

Primary Pneumonia.

Of the 2,421 known cases of primary pneumonia 1,222 were classified as lobar pneumonia, 1,179 as lobular pneumonia, and 20 simply as pneumonia. The number of cases which were investigated was 2,336, and of these the case-fatality was 32·7 per cent. for lobar pneumonia, 46·9 per cent. for lobular pneumonia, and 75 per cent. for the unclassified cases.

Influenzal Pneumonia.

Of the 534 cases of influenzal pneumonia which came to our notice, 514 cases were fully investigated.

The case-fatality was 34·04 per cent.

The distribution according to sex of these investigated cases of influenzal pneumonia, is as follows:—

	Males.	*Females.*	*Totals.*
Cases	271	243	514
Deaths	93	82	175

Secondary Pneumonia.

138 cases of secondary pneumonia were investigated during the year, and were associated with the following diseases:—

Measles	59	cases.
Whooping cough	73	„
Other diseases	6	„
Total	138	cases.

The case-fatality was 43·4 per cent.

With 20 exceptions the cases occurred among children under five years of age.

Cases of secondary pneumonia are *not* notifiable under the Pneumonia, Malaria, and Dysentery Regulations of 1918.

The health visitors paid 7,373 visits in connection with cases suffering from all forms of pneumonia.

1,294 cases were transferred to hospital, and of those nursed at home 338 were attended by a nurse supplied by the District Nursing Association.

Assistance in the form of milk was allowed in 94 necessitous cases; the total amount of milk granted being 1,449 pints.

INFLUENZA.

Influenza is not notifiable, but 867 cases came to the notice of this department through various channels.

The case-fatality rate was 24·1 per cent. 1,489 visits were paid by the health visitors in connection with the 858 cases investigated.

The distribution according to sex of the 858 cases investigated is as follows:—

	Males.	*Females.*	*Totals.*
Cases	367	491	858
Deaths	57	110	167

In order, however, to obtain a true picture of the incidence of influenza in the City during 1931, it is necessary to add to these figures those cases which, commencing as influenza but as yet unknown to the department, later developed into influenzal pneumonia, and were then notified as such. Of these there were 534, which reveals a total of 1,401 known cases of influenza for the year.

Of these total cases 995, or 71 per cent., occurred in the first quarter, and the majority of these in the month of February, as in 1929.

The distribution according to sex on these total figures is therefore:—

	Males.	*Females.*	*Totals.*
Cases	638	734	1,372
Deaths	150	192	342

TABLE SHOWING THE NUMBER OF PRIMARY, INFLUENZAL, AND SECONDARY PNEUMONIA CASES WHICH HAVE COME TO THE KNOWLEDGE OF THIS SECTION OF THE PUBLIC HEALTH DEPARTMENT DURING 1931.

THE TABLE ALSO SHOWS THE NUMBER OF NOTIFIED CASES, THE NUMBER OF CASES FULLY INVESTIGATED, AND THE TOTAL NUMBER OF KNOWN CASES.

	Notified Cases	Cases fully investigated	Cases not fully investigated	Total known Cases of Primary, Influenzal, and Secondary Pneumonia occurring in 1931	
(*a*) *Primary Pneumonia*—					
1. Number of primary pneumonia cases notified and fully investigated	1,939	1,939			
2. Number of primary pneumonia cases notified and not fully investigated	66				
3. Number of primary pneumonia deaths not previously notified but fully investigated ..		397 } 2,336	66 } 85	2,421 (Primary)	
4. Number of primary pneumonia deaths not previously notified and not fully investigated			19		
(*b*) *Influenzal Pneumonia*—					
1. Number of influenzal pneumonia cases notified and fully investigated	461	461			
2. Number of influenzal pneumonia cases notified and not fully investigated	19				
3. Number of influenzal pneumonia deaths not previously notified but fully investigated ..		53 } 514	19 } 20	534 (Influenzal)	3,093
4. Number of influenzal pneumonia deaths not previously notified and not fully investigated			1		
(*c*) *Secondary Pneumonia*—					
1. Number of secondary pneumonia cases notified and fully investigated	132	132			
2. Number of secondary pneumonia cases notified and not fully investigated	..				
3. Number of secondary pneumonia deaths not previously notified but fully investigated ..		6 } 138	.. } ..	138 (Secondary)	
4. Number of secondary pneumonia deaths not previously notified and not fully investigated			..		
TOTALS	2,617	2,988	105	3,093	

DYSENTERY.

Six cases of bacillary dysentery, 3 of which occurred simultaneously in one household, came to the notice of the Health Department during the year.

During the year the 13 cases of dysentery and 6 carriers which are known to the Department have been visited each six months. The investigation of the health of the members of the patients' families revealed no suspicious symptoms.

MALARIA.

One death from malaria was notified during 1931. The patient contracted it whilst living abroad.

ANTHRAX.

No cases of anthrax were notified during the year 1931.

FOOD POISONING.

Two unassociated cases of food poisoning occurred during 1931, the B. Aertrycke being the causative organism concerned in both.

PUBLIC HEALTH (MEAT) REGULATIONS, 1924.

These regulations, which came into force on May 1st, 1925, are administered by the Public Health Committee in so far as Part V., which relates to shops, stores, etc., is concerned. With a view to the equitable administration of the regulations, the co-operation of the interested trades was sought, and mutual agreement with the associations concerned was arrived at on the following points :—

Requirements.

1. Meat shall not be hung outside premises.

2. All meat which is displayed must be protected from the dust of the streets by glass windows.

3. Reasonable precautions must be taken to protect meat from flies.

4. The provision of a covered receptacle of suitable material for refuse and sweepings is imperative, and the receptacle must be kept clean.

5. Shops must be adequately ventilated.

Suggestions.

1. That means be adopted for keeping all prepared meats covered. (Transparent paper could be used with good effects.)

2. That each shop be provided with a cold store or ice box for the storage of meat.

3. Persons engaged in the sale or handling of meat should wear white overalls. (Coloured ones now in use when worn out to be replaced by white.)

4. That notices be exhibited in shops to the effect that foodstuffs should not be handled by customers.

5. That, wherever possible, vertical glass fronts be provided on counters to protect meat, etc., from contact with or handling by customers.

6. Particulars of structural arrangements required in premises where food is prepared may be obtained on application to the Medical Officer of Health.

These agreed conditions have greatly facilitated the administration of the Meat Regulations. This strikingly illustrates the value of conference between the Public Health Committee and accredited representatives of interested trades as a preliminary to administration of such regulations.

2,789 visits were paid during the year to meat shops by the special inspectors, and it was found that these requirements and suggestions were generally being carried out. In 3 cases a cautionary letter was necessary.

REPORT FROM MARKETS DEPARTMENT AS TO SUPERVISION OF MEAT AND OTHER FOODS.

The Medical Officer of Health is indebted to Mr. A. Chadwick, General Superintendent, for the following particulars relating to the operations of the Markets Department during the year ending 31st March, 1931.

At the City Abattoir and Wholesale Meat Market the business has considerably increased during the past 31 years, as is shown in Statement "A" attached.

The bulk of the meat, fish, fruit, etc., which is condemned is found to be unfit for food on arrival at the markets, railway stations, wholesale houses, etc., and by the system which operates of carrying out an efficient inspection at the centre of distribution, the risk of diseased meat, etc., being exposed in retail shops is lessened.

Statement "B" shows the total condemnations in the City, and Statement "C" the total weight of meat condemned at the City Abattoir.

Statement "A."

ANIMALS SLAUGHTERED AT CITY ABATTOIR DURING CERTAIN YEARS.

Year ending 31st March	Cattle	Sheep	Lambs	Calves	Pigs
1900	34,675	106,855	45,595	872	18,163
1910	38,389	193,855	57,553	2,179	10,486
1920	89,143	214,363	48,656	8,202	9,636
1921	44,278	116,407	46,004	6,432	12,747
1922	53,348	232,581	57,159	5,359	19,601
1923	65,138	222,875	97,087	5,631	17,897
1924	55,332	192,906	78,739	3,364	15,662
1925	60,171	252,382	80,474	3,667	19,168
1926	54,027	271,127	76,460	5,192	16,106
1927	55,054	275,571	94,173	5,401	13,623
1928	65,386	330,894	111,286	5,518	18,584
1929	68,510	308,361	134,489	5,343	18,803
1930	73,244	272,868	119,299	5,472	15,259
1931	64,354	240,219	106,091	5,246	14,945

Statement "B."

TOTAL CONDEMNATION OF VARIOUS FOODSTUFFS DURING CERTAIN YEARS.

	1924	1925	1926	1927	1928	1929	1930	1931
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Meat	325¼	406¼	342	386¼	426	407¾	472¼	434¼
Fish	110	83¼	91½	181¼	111¼	118½	98½	135
Fruit	61¾	85¼	74¼	72½	31½	28½	20½	49½
Vegetables	64½	207	261½	149	81¾	132¾	199¼	179½
Eggs (number	29,922	95,368	14,739	2,595	15,781	786	1,150	..
Game (head)	386	3,350	1,342	1,789	2,089	1,097	645	338
Poultry (head)	6,192	4,870	4,712	5,695	3,608	3,153	3,440	3,544
Rabbits (head)	19,021	20,611	14,290	12,861	12,780	5,325	7,895	9,107

Statement "C."

Meat Condemned at the City Abattoir and Wholesale Meat Market during certain Years.

	1924	1925	1926	1927	1928	1929	1930	1931
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Total weight of meat condemned at the City Abattoir and Wholesale Meat Market	293¼	370½	311¼	353¼	399	379	451¾	403¾
Of which the weight of dressed meat consigned from places other than the City was ..	168¾	171¾	121¼	151½	136	142¾	167½	181¼
Included in which were Imported Offals amounting to	2½	2¾	5¼	3½	5½	½	2½	2½

Amount of Unwholesome Food Condemned during the Year ended 31st March, 1931.

	1929-30	1930-31
Meat :—		
Beef	lbs. 909,718	lbs. 822,426
Mutton	41,202	29,348
Veal	20,928	24,603
Venison	246	411
Pork	80,273	90,451
Imported Offal	5,565	5,415
	1,057,932 = 472¼ tons	972,654 = 434¼ tons
Fish :—		
Fish	188,876	270,647
Shellfish	32,098	31,765
	220,974 = 98½ tons	302,412 = 135 tons

FOOD CONDEMNED DURING THE YEAR—*continued*

	1929-30	1930-31
	HEAD	HEAD
GAME	645	338
POULTRY	3,440	3,544
RABBITS	7,895	9,107
	LBS.	LBS.
FRUIT	46,034 = 20½ tons	110,646 = 49½ tons
VEGETABLES	446,473 = 199¼ tons	402,075 = 179½ tons
MISCELLANEOUS :—	NO.	NO.
Eggs	1,150	..
	LBS.	LBS.
Condensed Milk	160	356
Sundry Provisions	514½	643¼

With the exception of the following, which were seized while deposited or exposed for sale, the above quantities were surrendered after being condemned by the Inspectors of the Department :—

	1929-30	1930-31
	LBS.	LBS.
Meat	10½	57
Fish	135	..
Fowl	..	..
Rabbits	..	..
Fruit	540	50
Poultry	..	..

NOTE.—The term "surrendered" includes cases in which the Inspectors have discovered the diseased meat, etc., in the course of their duty, but in which, owing to salesman's acceptance of the Inspector's decision, it has been deemed unnecessary to obtain a magistrate's order prior to destruction.

VETERINARY AND MILK CONTROL SECTION.

By R. C. Locke, M.R.C.V.S., D.V.S.M. (Vict.),
Veterinary Officer.

There has been no radical change in the policy of the above-named section during 1931.

Country Farms.

Samples of milk from 896 country farms were taken during the year, showing an increase of 146 farms sampled above the figure for 1930, which was the previous highest number in the history of the Department. Of these, 145 were found to contain tubercle bacilli, giving a percentage of 16·18, and representing an increase of 1·92 per cent. over last year's figure. It is significant that this figure has only once been exceeded since 1901 as reference to Table 7 will show.

In connection with the inspections of the infected herds, 128 cows suffering from tuberculosis of the udder were found, and, of these, 32 were in a sufficiently advanced state to be condemned on clinical examination alone. In 55 cases there was a history of the infected animal having been removed from the farm in the interval between the taking of the sample and the inspection of the herd. In many cases there is more than one offending animal found on inspection of a herd. In fact, in 13 cases 2 animals giving tuberculous milk were found at each farm ; in 6 cases 3 such animals were found ; in 3 cases 4 animals were found ; and in 1 case as many as 6 cows had to be slaughtered before the supply was clear of infection.

It is pleasing to note that the Cheshire County Council have decided to appoint a whole-time Veterinary Officer to deal with this question, and it is to be hoped that the time is not far distant when other counties will take more active steps in this direction.

City Farms.

Reference to Table 1 will show that the number of farms on the register has increased to 87, with accommodation for approximately 2,000 cows. This increase is due to the extension of the City boundary to include the parishes of Baguley, Northen Etchells, and Northenden.

The general health of the cattle has been good, and only one cow suffering from tuberculosis of the udder was found during the year. No action has as yet been taken with regard to bringing the farms recently included in the City up to the standard required by the Milk and Dairies Order, 1926, as the future of many is rather indefinite.

City Dairies.

The work in connection with the dairies in the City has been carried out as in previous years with the object of maintaining a high standard of cleanliness and suitability of premises.

Owing to the wide-spread sale of milk in bottles, special attention has been paid to the facilities for sterilisation of the bottles and to the methods employed in closing the bottles satisfactorily. In this connection a number of washed bottles have been submitted to the Laboratory for bacteriological examination, and the results have been mostly satisfactory. In the unsatisfactory cases steps have been taken to improve the method employed.

During the year 9 prosecutions were instituted, particulars of which are given in Table 6, and in each case a conviction was obtained.

Particulars of the licences issued under the Milk (Special Designations) Order, 1923, are given in Table 5. On the whole the demand for the raw graded milks remains stationary. Regarding the pasteurising establishments, one more licence was issued than was the case in 1930. The supervision of these establishments has been carried out with greater frequency than in the past, and in this direction more attention has been paid to the stricter control of the temperatures employed in the process.

Nineteen samples of "Certified" and "Grade A (Tuberculin Tested)" milk were taken on behalf of the Ministry of Health.

Retail Milkshops.

The Milkshops Inspectors have carried out 4,409 visits to milkshops during 1931. This figure is less than that of 1930, mainly on account of the increased attention paid to pasteurising establishments as mentioned above, and to premises used for the manufacture of ice cream.

Attention has been paid mainly to cleanliness, and the figures given in Table 6 show an improvement on the corresponding figures for 1930.

Ice Cream.

This side of the work of the section has had considerably more attention paid to it than in any previous year. The Manchester Corporation (General Powers) Act, 1930, came into force on January 1st, 1931, and during the year 118 premises were registered as suitable for the manufacture and/or sale of ice cream.

The major aim has been directed towards the elimination of many unsuitable premises which were in use for this purpose, and considerable progress has been made considering the short time that has elapsed. A much greater improvement should be evident in the near future.

The Milkshops Inspectors have paid 3,531 visits to ice cream premises during the year, an increase of 977 over 1930, and this has resulted in a very much improved standard of cleanliness. Two prosecutions were instituted, one in respect of dirty premises and the other under the new legislation for the using of unregistered premises. In each case a conviction was obtained. The work under this heading is summarised in Table 4.

Manchester Corporation Hospitals' Supply.

Crumpsall and Withington Hospitals and Institutions and Baguley Sanitorium have again been supplied with pasteurised milk. Regular sampling of the supplies has been carried out, and the results shown have given complete satisfaction throughout the year.

The supply of raw milk to Monsall Hospital has been, as in previous years, under the supervision of the Veterinary Officer, and visits have been paid to the farm concerned. The previous excellent standard has been consistently maintained throughout the year.

Booth Hall Hospital has also continued to receive a raw milk supply from Langho as previously. The high standard of purity of this supply has been maintained.

The milk supplied to the Abergele Sanatorium is produced at the farm run in connection with the Sanatorium. The dairy herd is mainly composed of Ayrshire cows, and these are regularly examined by the Veterinary Officer. Examination of samples of the milk is frequently carried out, and the results have shown that a high standard of quality and cleanliness has been maintained throughout the year.

TABLE I.

City Farms.	
Total number of farms in City	87
Accommodation for 2,000 cows.	
Number of visits paid to farms by Veterinary Officer	84
,, cowsheds inspected	177
,, cows examined	1,194
,, samples taken	38
,, cows suffering from tuberculosis of the udder	1
Country Farms.	
Number of visits paid to farms by Veterinary Officer	126
,, cowsheds inspected	350
,, cows examined	2,694
,, cows found with tuberculous udders	128
,, cows removed from farms prior to visits of Veterinary Officers	55

Table II.

Milk Samples.

Samples Examined for Tubercle Bacilli.	
Collected by Food and Drugs Inspectors at—	
(*a*) Railway Stations	88
(*b*) Vehicles entering the City by road	686
Collected by Milkshops Inspectors at—	
(*a*) Hospitals and Institutions	29
(*b*) City Dairies and Milkshops	90
(*c*) Vehicles	404
(*d*) Railway Stations	14
Number of samples taken at farms by Veterinary Officer	43
Number of samples not examined from various causes	16
Number of samples proved to cause tuberculosis	†180
Samples Examined for Chemical Analysis, Bacterial Count, Bacillus Coli, etc.	
Collected by Milkshops Inspectors at Hospitals, Dairies, Vehicles, etc.	*539
Collected by Milkshops Inspectors on behalf of the Ministry of Health	19

* Of these, 214 were also examined for Tubercle Bacilli.

† This figure includes 20 control samples.

Table III.

Samples of Milk Tested for Tubercle Bacilli.

Results of Examinations of Samples taken from January 1st to December 31st, 1931.

County	No. of Farmers represented by Samples of Milk	No. of Farmers sending Tuberculous Milk	Percentage
Cheshire	447	90	20·13
Lancashire	76	12	15·78
Derbyshire	155	26	16·77
Staffordshire	191	15	7·85
Shropshire	10	2	20·00
Westmoreland	..	..	..
Cumberland	3	..	..
Montgomeryshire	1	..	..
Yorkshire	12	..	..
Lincolnshire	1	..	..
Totals	896	145	16·18

Table IV.

Ice Cream.

Number of premises on register—December 31st, 1931	118
,, visits by Milkshops Inspectors	3,531
,, applications approved	118
,, applications refused	70
,, premises in disrepair	10
,, sites for new premises inspected	18
,, persons warned for dirty utensils	119
,, ,, ,, uncovered mixture	43
,, ,, ,, dirty clothing	6
,, ,, ,, dirty premises	43
,, prosecutions taken in respect of dirty premises	1
,, ,, ,, ,, using unregistered premises ..	1

Table V.

Milk (Special Designations) Order, 1923.

Licences issued during the year 1931.

Producer's licence to use the designation "Grade A"	1
Dealer's licence to use the designation "Certified"	11
Dealer's licence to use the designation "Grade A (Tuberculin Tested)"	4
Dealer's licence to use the designation "Grade A"	4
Dealer's licence to use the designation "Pasteurised" :—	
(*a*) Pasteurising establishments	17
(*b*) Shops	1
Supplementary licence to use the designation "Grade A"	2
Supplementary licence to use the designation "Pasteurised" ..	1

Table VI.

Milk and Dairies (Consolidation) Act, 1915, and Order.

Number of	registered premises—December 31st, 1931	1,021
,,	visits to dairies and milkshops by Milkshops Inspectors..	4,409
,,	applications approved by Committee	170
,,	applications refused by Committee	50
,,	persons struck off register by resolution of City Council..	1
,,	milk vessels uncovered	30
,,	milk vessels found dirty	25
,,	milkshops found dirty..	63
,,	premises in disrepair	17
,,	unsatisfactory washing accommodation	37
,,	milk conveyances found dirty	11
,,	milk conveyances without name and address	10
,,	milk purveyors found bottling milk in street	2
,,	sites inspected for new dairies	26
,,	persons warned for opening sealed bottled milk	6
,,	prosecutions taken in respect of bottling milk in street	2
,,	prosecutions taken in respect of persons selling milk not being registered for such purpose	5
,,	prosecutions taken in respect of dirty premises	1
,,	prosecutions taken in respect of using vehicle without name and address on same	1

Table VII.

Year	Number of Farmers' Milk tested during the year	Total number found to cause Tuberculosis in the experimental animal	Percentage of Farmers sending Tuberculous Milk	Percentage of Farmers from EACH COUNTY whose Milk was proved to cause Tuberculosis									
				Cheshire	Derbyshire	Staffordshire	Shropshire	Lancashire	Yorkshire	Cumberland	Montgomeryshire	Westmoreland	Lincolnshire
1901 ..	272	27	9·90	10·46	9·23	8·00	10·00	..	..	..	..	..	..
1902 ..	345	36	10·40	12·72	8·65	4·01	..	8·31	..	..	..	..	..
1903 ..	329	45	13·60	14·76	9·58	15·15	40·00	..	..	..	..	..	..
1904 ..	318	29	9·10	11·17	6·02	..	..	7·14	25·00	..	..	..	..
1905 ..	565	47	8·30	10·26	6·00	6·38	..	2·98	12·50	..	..	..	..
1906 ..	542	42	7·70	8·60	6·50	9·30	12·50	4·00	..	..	..	..	..
1907 ..	562	38	6·76	7·71	4·48	6·94	12·50	3·70	..	..	..	..	..
1908 ..	289	27	9·34	11·56	6·25	7·70	..	2·94	12·50	..	..	..	..
1909 ..	535	31	5·79	4·80	7·47	8·57	11·11	3·33	..	..	..	..	..
1910 ..	468	30	6·41	6·20	8·69	5·55	..	..	..	..	..	..	..
1911 ..	494	51	10·32	11·11	2·50	12·12	10·00	12·20	50·00	..	..	..	..
1912 ..	484	54	11·15	12·94	4·00	10·20	33·33	6·00	10·00	..	..	..	..
1913 ..	486	60	12·51	13·99	11·58	9·26	33·33	5·88	20·00	..	..	..	..
1914 ..	352	34	9·66	12·39	8·19	..	..	2·77	..	..	..	..	..
1915 ..	69	9	13·04	16·21	..	..	..	13·63	..	..	..	..	..
1916 ..	321	38	11·83	11·59	8·80	13·04	..	6·97	..	..	..	..	..
1917 ..	365	37	10·13	13·54	9·30	4·30	..	11·70	..	..	..	..	..
1918 ..	288	18	6·25	8·17	5·12	4·16	..	3·57	..	..	..	..	..
1919 ..	240	20	8·30	8·84	8·00	4·55	..	8·10	..	..	..	..	..
1920 ..	194	29	14·94	18·75	10·71	..	..	5·88	..	..	..	..	
1921 ..	305	37	12·13	16·23	4·17	..	..	10·52	..	..	..	..	..
1922 ..	243	21	8·64	10·52	6·34	6·66	..	3·57	..	..	..	..	..
1923 ..	296	33	11·14	12·94	7·14	10·34	..	9·75	..	..	..	..	..
1924 ..	453	43	9·49	10·80	8·69	8·82	..	5·12		..	..	..	..
1925 ..	292	24	8·21	10·00	11·86	4·34	..	..	..	..	..	..	..
1926 ..	474	49	10·33	12·26	11·76	6·94	..	5·76	..	..	..	..	..
1927 ..	604	67	11·09	14·11	4·62	6·52	..	14·81	..	..	..	..	..
1928 ..	694	122	17 57	18·10	24·50	16·83	33·33	10·00	..	22·22	50·00	..	..
1929 ..	697	88	12·62	12·85	13·0	13·84	..	9·89	42·85	..	..	..	..
1930 ..	750	107	14·26	17·01	14·28	11·62	..	8·10	..	..	..	..	..
1931 ..	896	145	16·18	20·13	16·77	7·85	20·00	15·78	..	..	..	..	..
Total..	13222	1438	10·87	..	..	..	..	..	..	..	..	..	..

Table VIII.

SOURCE OF SAMPLES			NUMBER OF SAMPLES EXAMINED FOR TUBERCLE BACILLI				Number of visits paid to Farms	Number of Cows Examined	COWS WITH TUBERCULOUS UDDERS		
			Primary and Subsequent	Control	Total	Positive Results			Found	Slaughtered under Tuberculosis Order, 1925 (Condemned Clinically)	Removed from Farm prior to visit
By Food and Drug Inspectors	Railway Stations		81	7	88	12	..	..	..	..	..
	Carts and City Dairies ..		608	78	686	*90	..	..	..	..	..
By Milkshops Inspectors	Hospitals and Institutions (Mixed)		29	..	29	1	..	..	..	..	..
	Carts, City Farms, City Dairies, and Railway Stations		460	48	508	†73	..	..	..	..	..
By Veterinary Officer	Country Farms	Individual	1	..	1	..	126	2,694	96	32	55
		Group ..	..	..	..	..					
	City Farms	Individual	22	..	22	1	84	1,194	1	..	..
		Group ..	16	..	16	3					
Totals			1,217	133	1,350	180	210	3,888	97	32	55

* Includes 11 control samples proved positive.
† Includes 9 control samples proved positive.

TUBERCULOSIS.

By Dr. D. P. Sutherland, Senior Tuberculosis Officer.

In the report for 1930 a quinquennial review of the whole of the service was given and reference was made to the general progress of work under the scheme.

Since that report was prepared the Abergele Sanatorium extension has been completed, and the institution was formally opened in June, 1931. Provision now exists for the treatment of 210 additional cases of tuberculosis of all forms in children, and the patients are being admitted as rapidly as the accommodation allows and by the end of 1931 104 beds were occupied. Reference to the section dealing with the Abergele Sanatorium will give further details of this part of the work.

At the end of 1931 the new Tuberculosis Offices and Clinic at 352, Oxford Road, were nearly completed, and they were formally opened at the beginning of April, 1932. Further details of this extension will appear in the next annual report.

The death-rate for pulmonary tuberculosis was again lower than that for the preceding year, being 1·12 per thousand for males and females. This reduction was accounted for by a decrease in the mortality amongst women, amounting to a reduction of ·09 from 1930. There was a slight increase in the male death-rate of ·02. This occurred chiefly in the decennial period 35—44, and the decline in female deaths was mostly from ages 35—54.

The non-pulmonary death-rate was also reduced to ·17 per 1,000, which is the lowest figure recorded.

The death-rate for the City for all diseases was higher than in 1930, the increase being marked in respiratory diseases excluding tuberculosis.

The notification rate was not materially different in 1931 from that in 1930 for pulmonary tuberculosis, but a slight increase appears owing to a revision of the population figures. The non-pulmonary forms showed an increased rate to ·65 per 1,000, this being an advance of ·06. The ages affected in this were 10—19 and 25—54, the earlier ages showing no appreciable change.

The statistical tables for the year are set out in the following pages :—

Comparative Figures.

Table I.

Rates per Thousand of the Population.

	1926	1927	1928	1929	1930	1931
Death Rates :—						
General	13·28	13·90	13·06	15·51	13·07	13·86
All respiratory diseases (except tuberculosis)	2·61	2·93	2·42	3·25	2·10	2·59
Tuberculosis (all forms) ..	1·41	1·38	1·29	1·4	1·37	1·29
Phthisis, both sexes	1·19	1·15	1·10	1·21	1·15	1·12
,, males only	1·58	1·41	1·42	1·54	1·41	1·43
,, females only	·84	·92	·80	·91	·91	·82
Non-pulmonary tuberculosis, both sexes	·22	·22	·19	·19	·22	·17
Tuberculosis Notification Rates:—						
All forms	2·44	2·53	2·51	2·28	2·23	2·32
Pulmonary only	1·84	1·88	1·87	1·79	1·64	1·67
Non-pulmonary only	·60	·65	·64	·48	·59	·65

Table 2.

New Cases and Deaths during 1931.

Age Periods	New Cases				Deaths			
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmonar	
	M.	F.	M.	F.	M.	F.	M.	F.
0	—	1	5	6	2	1	4	6
1	4	6	52	31	2	2	24	19
5	36	39	54	41	2	4	4	7
10	26	37	40	47	3	7	4	5
15	65	78	32	35	24	43	5	11
20	83	108	20	20	45	66	1	1
25	126	137	24	31	93	102	7	9
35	135	74	10	12	102	49	5	4
45	138	53	16	7	129	37	2	3
55	85	28	1	5	89	20	4	2
65 and upwards	20	6	6	2	28	5	3	2
Totals ..	718	567	259	237	519	336	63	69

The number of non-notified deaths from pulmonary tuberculosis was 22 = 2·57 per cen
The number of non-notified deaths from non-pulmonary tuberculosis was 29 = 21·
per cent.

The percentage of non-notified deaths from all forms of tuberculosis was 5·16.

There were, in addition, 23 deaths of non-notified cases outside Manchester whic
were adjudged by the Registrar-General to be properly referable to this area.

The above figures indicate that notification of pulmonary tuberculosis in the area is practically complete.

It is to be noted that 15 of the 29 cases were certified as cases of tubercular meningitis—these had a very short illness as a rule and diagnosis was often in some doubt during life.

The increased accommodation now furnished for the treatment of non-pulmonary tuberculosis at Abergele will, it is hoped, help in the further reduction of the number of non-notified deaths from surgical tuberculosis.

Table 3.

Primary Notifications of Pulmonary and Non-Pulmonary Tuberculosis received from Municipal Wards during 1931.

Wards	Pulmonary	Non-Pulmonary	Totals
1. Exchange	..	..	..
2. New Cross	82	21	103
3. St. Clement's	16	9	25
4. Oxford	2	..	2
5. St. John's	16	4	20
6. St. Ann's	..	..	..
7. St. Michael's	47	23	70
8. Collyhurst	46	31	77
9. Cheetham	45	11	56
10. Collegiate Church	34	8	42
11. Crumpsall	19	6	25
12. Blackley	32	13	45
13. Harpurhey	31	11	42
14. Moston	27	15	42
15. Newton Heath	28	12	40
16. Miles Platting	54	19	73
17. Bradford	39	17	56
18. Beswick	41	10	51
19. Ardwick	63	19	82
20. Openshaw	54	15	69
21. St. Mark's	49	27	76
22. Longsight	25	13	38
23. All Saints'	51	12	63
24. St. Luke's	66	23	89
25. Medlock Street	57	25	82
26. St. George's	62	23	85
27. Moss Side East	36	4	40
28. Moss Side West	27	7	34
29. Chorlton-cum-Hardy	41	25	66
30. Didsbury	22	11	33
31. Withington	35	18	53
32. Gorton North	34	17	51
33. Gorton South	35	20	55
34. Levenshulme	20	11	31
35. Rusholme	25	7	32
36. Wythenshawe (includes transfers)	24	9	33
Total—City of Manchester	1,285	496	1,781

Table 4.

Sources of Notification of Tuberculosis during 1931.

Source	Pulmonary	Non-Pulmonary	Totals
Crumpsall Hospital	92	20	112
Withington Hospital	92	18	110
Booth Hall Hospital	22	63	85
Manchester Royal Infirmary	40	92	132
Ancoats Hospital	28	34	62
Skin Hospital	..	33	33
St. Mary's Hospital	6	10	16
Northern Hospital	3	10	13
Jewish Hospital	7	6	13
Pendlebury Hospital	8	26	34
Babies' Hospital	1	2	3
Hulme Dispensary	1	..	1
Gartside Street Dispensary	5	15	20
Hardman Street Dispensary	162	9	171
Asylums	5	2	7
Schools	2	23	25
Tuberculosis Staff	28	10	38
Military	5	..	5
Various Sources	58	16	74
Private Practitioners	717	96	813
Child Welfare Centres	3	..	3
Swinton House	..	11	11
Total	1,285	496	1,781

245 tenants have allowed the removal of bedding, etc., for disinfection ; or have themselves burned it in a few instances.

84,132 cardboard boxes have been prepared in the office and supplied to patients for spitting purposes in the home.

659 spit bottles have been supplied for use outside the house.

18,074 visits have been made by the Enquiry Officers during the year.

45,212 letters were sent out.

792 notices warning against spitting on floors, etc., have been supplied to offices and workshops.

Table 5.

Sources of Primary Notification of Non-Pulmonary Cases for the Years 1918 to 1931.

Source	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
mpsall Hospital	49	22	15	15	11	21	34	24	13	14	16	20	20	20
hington Hospital..	..	..	11	29	39	33	29	22	20	11	13	16	21	18
th Hall Hospital	45	33	43	60	35	38	47	67	52	58	43	28	64	63
tside District Medical fficers	2	1	..	..	..	..	2	..	..	..	..	..	2	..
val Infirmary	111	58	95	95	69	125	99	99	80	106	98	60	60	92
oats Hospital	57	34	31	27	45	76	76	57	50	47	40	22	33	34
n Hospital	35	32	46	66	37	48	41	37	38	37	37	29	36	33
Mary's Hospital	25	2	4	..	21	21	15	14	7	17	13	6	8	10
thern Hospital	1	1	9	4	17	30	5	15	7	7	9	3	2	10
ish Hospital..	1	19	11	1	1	1	5	10	7	1	7	3	5	6
dlebury Hospital..	8	5	2	3	4	8	8	16	10	5	12	10	30	26
ies' Hospital	..	..	..	..	..	..	..	..	6	2	..	..	2	2
me Dispensary	1	..	..	..	..	..	..	..	2	..	..	..	..	..
tside Street Dispensary ..	66	19	25	63	36	71	41	61	33	34	22	21	23	15
dman Street Dispensary ..	15	9	23	23	33	21	11	7	8	9	21	16	20	9
vdon Hospital	.	..	2	..	..	3	1	..	..	..	1	1	..	..
lums	6	2	8	7	2	..	2	1	1	1	..	2	2	2
ools..	5	3	37	31	38	34	23	26	11	10	20	4	9	23
erculosis Office Staff	6	16	16	7	13	20	19	9	6	11	12	20	13	10
tary	14	2	..	1	3	7	1	2	2	1	..	..	..	..
ious Sources	17	8	11	13	21	20	14	29	9	19	22	12	25	16
vate Practitioners	234	168	148	131	180	152	150	126	101	113	104	102	89	96
ld Welfare Centres	..	..	..	..	..	..	..	..	..	..	..	..	2	..
nton House	..	..	..	..	..	..	..	..	..	..	..	..	..	11
	698	434	537	576	605	730	623	622	463	503	490	375	466	496

Table 6.

Number of New Cases of Pulmonary Tuberculosis Notified during the Years 1900 to 1931.

Year	Poor-law Cases	Institutions	Private Practitioners	Total
(1) 1900*	578	455	540	1573
1901	625	373	341	1339
1902	667	305	303	1275
1903	556	550	251	1357
1904	512	440	250	1202
1905	527	588	291	1406
1906	565	510	304	1379
1907	634	646	310	1590
(2) 1908	659	498	346	1503
1909	681	542	384	1607
1910	543	760	356	1659
(3) 1911	517	897	423	1837
(4) 1912	488	947	969	2404
(5) 1913	345	717	1350	2412
1914	483	877	1304	2664
1915	279	740	1194	2213
1916	322	817	1410	2549
1917	470	716	1061	2247
1918	268	563	1015	1846
1919	208	538	845	1591
1920	206	629	672	1507
1921	257	632	722	1611
1922	233	567	656	1456
1923	239	546	659	1444
1924	223	555	731	1509
1925	262	496	746	1504
1926	220	422	765	1407
1927	241	441	756	1438
1928	253	361	824	1438
1929	201	382	802	1385
1930	201	377	709	1287
1931	206	362	717	1285
Total	12669	18249	22006	52924

* This table does not include 425 cases notified in 1899.

(1). Voluntary notification of Pulmonary Tuberculosis—Manchester scheme.

(2). Compulsory notification (Tuberculosis Regulations) from Poor Law institutions.

(3). Compulsory notification from voluntary institutions.

(4). Compulsory notification of Pulmonary Tuberculosis by all practitioners.

(5). Compulsory notification of all forms of Tuberculosis.

TABLE 7.

NUMBER OF NEW CASES OF NON-PULMONARY TUBERCULOSIS NOTIFIED DURING THE YEARS 1913-1931.

Year	Total		Total
	Males	Females	
1913	759	714	1,473
1914	519	413	932
1915	422	415	837
1916	418	467	885
1917	433	449	882
1918	345	353	698
1919	206	228	434
1920	280	257	537
1921	295	281	576
1922	321	284	605
1923	350	380	730
1924	316	307	623
1925	322	300	622
1926	239	224	463
1927	277	226	503
1928	214	276	490
1929	204	171	375
1930	251	215	466
1931	259	237	496
Total	6,430	6,197	12,627

Primary Notifications and Deaths from Pulmonary Tuberculosis, 1917-1931.

Table 8.

Age—Groups.

Pulmonary Tuberculosis	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	Total	
												Notifications	Deaths
Notifications, 1917—1921 ..	23	216	578	596	842	838	1659	1710	1321	649	295	8732	
Deaths, „ „ .	17	72	68	154	481	461	850	1159	1063	523	227		5085
Notifications, 1922	6	38	107	92	138	148	288	293	216	91	39	1456	
Deaths, „	5	15	7	14	74	117	191	202	185	96	41		947
Notifications, 1923	3	23	103	84	159	160	294	273	207	106	32	1444	
Deaths, „	3	12	8	18	96	117	181	190	193	82	31		931
Notifications, 1924	2	30	81	90	174	175	297	298	237	97	28	1509	
Deaths, „	3	8	4	13	91	97	168	218	188	86	30		906
Notifications, 1925	7	41	70	97	152	178	279	269	254	122	35	1504	
Deaths, „	3	13	8	14	109	97	179	193	234	105	42		997
Notifications, 1926	14	39	43	68	165	188	282	254	217	104	33	1407	
Deaths, „	6	21	6	9	66	106	171	200	186	99	35		905
Notifications, 1927	3	36	75	81	138	186	251	275	245	114	34	1438	
Deaths, „	3	15	9	14	83	110	157	159	198	101	32		881
Notifications, 1928	3	16	63	66	144	158	319	258	233	149	29	1438	
Deaths, „	2	8	6	12	65	109	161	167	182	109	31		843
Notifications, 1929	1	18	38	43	146	191	294	254	235	135	30	1385	
Deaths, ...	1	7	3	7	76	117	179	190	191	121	38		930
Notifications, 1930	2	11	55	37	147	184	263	227	203	122	36	1287	
Deaths, „	6	2	6	9	89	110	200	150	168	129	34		903
Notifications, 1931	1	10	75	63	143	191	263	209	191	113	26	1285	
Deaths, „	3	4	6	10	67	111	195	151	166	109	33		855
Total notifications	70	478	1288	1317	2348	2597	4489	4320	3559	1802	617	22885	
Total deaths	52	177	131	274	1297	1552	2642	2979	2954	1551	574		14183

Primary Notifications and Deaths from Non-Pulmonary Tuberculosis, 1917-1931.

Table 9.

Age—Groups.

Non-Pulmonary Tuberculosis	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	Total	
												Notifications	Deaths
Notifications, 1917—1921 ..	103	567	646	557	397	109	218	140	105	80	45	3048	
Deaths, „ „ ..	138	386	172	171	134	70	85	76	55	41	29		1357
Notifications, 1922	13	134	132	112	77	40	33	24	18	9	13	605	
Deaths, „	28	85	31	23	18	12	8	8	12	6	11		242
Notifications, 1923	18	124	163	136	86	58	49	41	29	21	5	730	
Deaths, „	26	55	23	20	24	17	11	15	16	7	7		221
Notifications, 1924	20	127	128	102	91	49	49	25	14	7	11	623	
Deaths, „	24	82	17	23	27	18	13	7	10	6	2		229
Notifications, 1925	13	129	139	113	79	37	44	24	27	10	7	622	
Deaths, „	16	55	22	13	16	12	16	8	14	10	2		184
Notifications, 1926	17	86	82	81	63	38	38	23	23	6	6	463	
Deaths, „	15	45	20	18	16	12	15	13	8	5	3		170
Notifications, 1927	11	96	107	75	60	47	47	28	15	12	5	503	
Deaths, „	9	47	19	14	19	15	16	8	16	5	4		172
Notifications, 1928	12	74	112	71	71	46	47	26	18	8	5	490	
Deaths, „	11	35	19	15	14	7	19	15	4	6	4		149
Notifications, 1929	11	65	78	40	55	28	44	27	13	9	5	375	
Deaths, „	13	31	17	10	18	17	16	10	3	11	6		152
Notifications, 1930	17	89	108	63	46	42	41	20	20	16	4	466	
Deaths, „	10	49	20	9	23	16	13	11	14	3	6		174
Notifications, 1931	10	83	95	87	67	40	55	22	23	6	8	496	
Deaths, „	10	43	11	9	16	2	16	9	5	6	5		132
Total notifications	245	1574	1790	1437	1092	615	665	400	305	184	114	8421	
Total deaths	300	913	371	325	325	198	228	180	157	106	79		3182

Table 10.

Tuberculosis (Non-Pulmonary).—Primary Cases Notified during 1931.—Age Groups and Site.

Location of Disease	Age Groups																				Totals	
	0—		5—		10—		15—		20—		25—		35—		45—		55—		65—			
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Brain :—Tumour	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Meninges	17	13	1	5	1	1	2	3	..	..	4	..	1	..	.	2	..	..	..	..	26	24
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Glands :—Cervical	13	11	20	22	16	20	9	8	7	11	5	11	3	4	1	..	..	1	2	1	76	89
Mesenteric	2	..	2	..	5	3	3	2	..	..	..	..	..	..	..	..	..	..	..	..	12	5
Axillary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Inguinal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..
Tuberculous Peritonitis	2	..	6	1	..	3	2	6	..	..	1	2	..	1	1	..	..	..	..	..	12	13
Tuberculosis of Abdomen	4	1	9	3	4	4	..	2	1	..	..	..	..	..	..	..	..	..	..	..	18	10
,, of Breast	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, of Intestines	2	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	3	2
Joints :—Spine	5	4	2	3	2	2	4	1	2	..	5	1	..	..	2	2	..	..	..	..	22	13
Hip	3	5	7	2	2	6	3	2	4	..	1	..	1	..	3	1	..	2	2	..	26	18
Elbow	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1
Ankle	1	..	..	..	..	1	..	1	1	1	..	1	..	..	1	..	..	..	..	..	3	4
Wrist	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	2	1
Shoulder	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Knee	4	1	2	2	2	..	2	..	1	..	2	1	1	1	1	1	..	..	..	..	15	6
Bones :—Various	1	..	3	..	1	1	..	1	2	..	..	1	1	1	3	..	..	..	..	..	11	4
Tuberculosis of Skin	1	1	1	1	4	3	2	6	1	6	1	9	1	3	..	..	1	..	..	..	12	29
General Tuberculosis	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Special Organs :—Ear	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Bladder, etc.	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
Kidney	..	..	..	..	..	2	2	2	1	1	2	1	1	2	..	1	..	1	..	..	6	10
Testicle, etc.	..	..	..	..	1	..	1	..	..	..	2	..	..	..	2	..	..	..	1	..	7	..
Muscles, etc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rectum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unclassified	..	1	..	1	1	..	..	1	..	..	..	2	..	..	1	..	..	..	1	..	3	5
Totals	56	37	54	41	40	47	32	35	20	20	24	31	10	12	16	7	1	5	6	2	259	237

The Public Health Work is summarised in the following Table and Statement:—

TABLE II.—STATISTICS RELATING TO THE NOTIFICATION OF TUBERCULOSIS.

	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1914 to 1918	1899 Sept. 1st to 1913 Dec. 31st	Total
															Phthisis only	
Cases Visited and Registered—																
Males	975	1014	1058	1106	1173	1100	1232	1204	1277	1324	1285	1371	1288	9607	14170	39184
Females	806	806	809	919	866	872	937	1032	1023	1024	928	923	974	7295	8854	28068
Totals	1781	1820	1867	2025	2039	1972	2169	2236	2300	2348	2213	2294	2262	16902	23024	67252
Houses Disinfected—																
1. By Corporation—																
(*a*) With solution of chlorinated lime only	..	..	..	..	..	..	..	..	..	997	2133	2082	2507	7863	9015	24597
(*b*) With lime solution only	..	..	..	..	..	..	..	..	..	..	..	..	..	..	126	126
(*c*) *By Esmarch's method and solution of chlorinated lime	..	..	..	..	..	..	1332	1571	1607	717	..	..	..	7416	17232	29875
(*d*) † By fumigating lamp	3224	3115	2934	2693	2083	1635	128	..	..	..	..	..	..	..	..	15812
Totals	3224	3115	2934	2693	2083	1635	1460	1571	1607	1714	2133	2082	2507	15279	26373	70410
2. By Tenants—																
*Esmarch's method or chlorinated lime, etc.	6342	7032	7192	6868	7338	6967	6392	5647	5885	6268	6157	4891	4633	17633	36919	136164
Totals	9566	10147	10126	9561	9421	8602	7852	7218	7492	7982	8290	6973	7140	32912	63292	206574
Specimens of Sputum examined—																
Positive	408	360	392	360	348	347	325	391	558	528	534	437	305	3420	1705	15418
Negative	2236	2039	1698	1548	1573	1363	1415	1419	1753	1946	1585	1729	1342	8117	12176	41939
Totals	2644	2399	2090	1908	1921	1710	1740	1810	2311	2474	2119	2166	1647	11537	18881	57357
Cases in Hospital and Sanatoria	2275	2033	1919	1948	2062	1844	2027	2077	1942	2052	2139	2153	2035	11230	22669	60405
Notified from Common Lodging-houses	45	62	71	62	56	53	76	65	84	80	102	115	80	927	3109	4987
Number of cases under observation	9759	10060	10197	10494	10586	10680	10379	9949	9561	9258	8606	7990	7318	31367	33702 approx.	—

* Esmarch's method resumed in August, 1922, after suspension due to Food Control Order.

† Method commenced on 1st December, 1925.

TABLE A.—RETURN SHOWING THE WORK OF THE DISPENSARY DURING THE YEAR 1931.

Diagnosis	Pulmonary				Non-Pulmonary				Total			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—New cases examined during the year (excluding contacts)—												
(*a*) Definitely tuberculous	501	344	38	47	63	65	98	83	564	409	136	130
(*b*) Doubtfully tuberculous	..	..	..	..	..	..	..	..	55	41	9	7
(*c*) Non-tuberculous	..	..	..	..	..	..	..	..	475	521	181	200
B.—Contacts examined during the year—												
(*a*) Definitely tuberculous	5	14	8	6	..	1	3	..	5	15	11	6
(*b*) Doubtfully tuberculous	..	..	..	..	..	..	..	..	..	4	14	13
(*c*) Non-tuberculous	..	..	..	..	..	..	..	..	74	157	299	290
C.—Cases written off the Dispensary Register as—												
(*a*) Cured	125	103	19	23	74	74	51	59	199	177	70	82
(*b*) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error)	..	..	..	..	..	..	..	..	563	696	480	491
D.—Number of persons on Dispensary Register on December 31st—												
(*a*) Diagnosis completed	2,758	1,939	222	212	572	609	431	305	3,330	2,548	653	517
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	90	74	36	32

Total number of cases of Tuberculosis who received Treatment from the Dispensary .. 751

Total number of attendances at the Dispensary 16,675

TABLE B.

INSURED CASES APPLYING FOR TREATMENT FOR THE YEARS, 1914–1931.

	Males	Females	Total
1914	730	321	1,051
1915	572	315	887
1916	747	316	1,063
1917	728	359	1,087
1918	642	261	903
1919	630	255	885
1920	645	250	895
1921	615	255	870
1922	543	265	808
1923	539	291	830
1924	597	371	968
1925	610	327	937
1926	562	368	930
1927	555	296	851
1928	612	372	984
1929	610	376	986
1930	551	352	903
1931	555	360	915

Cases of discharged soldiers referred for treatment—248.

Number of patients who had so far recovered that no active signs of disease were found: Insured—417; Uninsured—392.

Contacts examined at their homes and at the Dispensary—888; of these, definite signs of tuberculosis were found in 37.

Grants of food were made in 3,507 instances to 660 families, and 27 grants of clothing were supplied to 26 patients in hospital and sanatoria to enable them to derive full benefit from treatment.

Special visits to the number of 12,571 have been paid by the Tuberculosis Nurses and 446 visits by the Clinical Nurse who attends to domiciliary patients requiring surgical dressings and nursing care.

TABLE C.—INSURED CASES TREATED IN 1931.

Residential	1,220
Dispensary	110
Domiciliary	2,599
Total	3,929

ANALYSIS OF CASES TREATED.

TABLE I.—*Residential (Insured).*

INSTITUTION	Total Cases Treated		Discharged from Institutions		Died	* Residential Treatment discontinued in other cases	Still Resi Trea on 1s 1
	Males	Females	Improved	Without Improvement			
	(1)		(2)	(3)	(4)	(5)	
			Pulmonary				
Baguley	438		156	62	71	..	1
		216	42	42	37	..	
Crossley	115		78	16	..	2	
		176	100	15	1	10	
Abergele	127		76	9	..	3	
		21	11	2	..	..	
Barrowmore	55		24	4	5	..	
		..	..	..	..	..	
Frimley	3		2	..	..	..	
		..	..	..	..	..	
Total Pulmonary	738	413	489	150	114	15	3
			Non-Pulmonary				
Manchester Royal Infirmary ..	20		20	..	.	..	
		21	20	..	..	1	
Skin Hospital	2		2	..	..	..	
		3	3	..	..	..	
Ancoats Hospital	1		1	..	..	..	
		1	1	..	..	..	
Shropshire Orthopœdic Hospital	11		4	..	1	..	
		10	9	..	..	..	
Total Non-pulmonary ..	34	35	60	..	1	1	
TOTAL—ALL FORMS	772	448	549	150	115	16	3

* The figures in column (5) relate to cases as to the progress of which no definite repo available for various reasons—*e.g.*, the withdrawal from the Institution of the insured per themselves before the expiration of the period for which they were nominated for the treatm

TABLE II.—*Residential (Uninsured).*

INSTITUTION	Total Cases Treated			Discharged from Institutions		Died	*Residential Treatment discontinued in other cases	Still under Residential Treatment on 1st Jan., 1932
	Males	Females (1)	Children	Improved (2)	Without Improvement (3)	(4)	(5)	(6)
			Pulmonary					
guley	77			29	6	15	..	27
		92		23	16	20	..	33
			..	..	..	..	..	..
ossley	22			12	5	..	..	5
		56		32	7	..	4	13
			..	..	..	..	..	..
ergele	12			6	3	..	..	3
		5		2	..	..	1	2
			46	2	..	..	..	44
rrowmore	10			6	1	..	..	3
		..		..	..	..	..	..
			..	..	..	..	..	..
imley	3			1	..	..	..	2
		..		..	..	..	..	..
			..	..	..	..	..	..
Total Pulmonary	124	153	46	113	38	35	5	132
			Non-Pulmonary					
ergele	..			..	..	..	..	..
		..		..	..	..	..	..
			61	1	..	..	..	60
anchester Royal Infirmary	3			3	..	..	..	..
		4		3	..	..	..	1
			8	8	..	..	..	..
in Hospital	1			1	..	..	..	..
		6		6	..	..	..	..
			6	6	..	..	..	..
coats Hospital ..	..			..	..	..	..	..
		..		..	..	..	..	..
			5	2	..	..	..	3
ropshire Orthopædic Hospital ..	3			2	..	..	..	1
		9		8	..	..	..	1
			1	1	..	..	..	..
Total Non-Pulmonary	7	19	81	41	..	..	..	66
TAL—ALL FORMS..	131	172	127	154	38	35	5	198

* The figures in column (5) relate to cases of which no definite report is available for various reasons—*e.g.*, the withdrawal from the Institution of the persons themselves before the expiration of the period for which they were nominated for the treatment.

TABLE III.—*Residential (Transferred Hospitals).*

Institution	Total Cases Treated			Discharged from Institution		Died	Still in Institution on 1st Jan. 1932
	Males	Females	Children	Quiescent	Not Quiescent		
Withington	582			48	289	160	85
		330		17	199	85	29
			..	..	..	..	..
Crumpsall	15			..	..	8	7
		11		..	..	8	3
			..	..	..	..	..
Booth Hall	..			..	..	..	..
		..		..	..	..	..
			200	29	79	42	50
Total—All forms ..	597	341	200	94	567	303	174

Under the Corporation scheme, patients suffering from non-pulmonary tuberculosis have received treatment at the Abergele Sanatorium (children only), Manchester Royal Infirmary, Shropshire Orthopædic Hospital, and Ancoats Hospital, and cases of tuberculosis of the skin have been treated at the Skin Hospital.

The types of case are summarised below :—

Bones and Joints	104
Glands	25
Genito-Urinary Tract	13
Abdomen	11
Lupus Vulgaris	177
Toxi-Tuberculids	4
Bazins Disease	16
Tuberculous Ulceration of Skin ..	19
Fistula	2
Soft Palate	1

Tables showing After History of Arrested Cases (Insured).

1921.

		No Tubercle Bacilli found.				*Tubercle Bacilli found.*				
Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1931	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1931	Lost sight of	Died
I.	M	30	16	10	4	M	16	10	2	4
	F	25	14	10	1	F	2	..	2	..
II.	M	25	12	6	7	M	16	6	6	4
	F	9	5	2	2	F	4	3	..	1
III.	M	5	2	..	3	M	1	..	..	1
	F	4	4	..	..	F	..	..	..	..
	M & F	98	53	28	17	M & F	39	19	10	10

1922.

I.	M	42	19	16	7	M	13	8	3	2
	F	17	7	6	4	F	4	2	2	..
II.	M	21	12	4	5	M	22	10	7	5
	F	13	8	4	1	F	9	6	3	..
III.	M	9	6	2	1	M	3	1	2	..
	F	3	1	1	1	F	..	..	..	..
	M & F	105	53	33	19	M & F	51	27	17	7

1923.

I.	M	21	11	6	4	M	18	9	3	6
	F	16	10	3	3	F	2	1	..	1
II.	M	20	14	4	2	M	3	1	..	2
	F	5	3	1	1	F	5	2	1	2
III.	M	4	2	..	2	M	6	2	1	3
	F	2	2	..	..	F	1	..	..	1
	M & F	68	42	14	12	M & F	35	15	5	15

1924.

I.	M	56	36	11	9	M	17	11	4	2
	F	24	16	5	3	F	3	3	..	..
II.	M	35	26	3	6	M	18	8	4	6
	F	19	15	1	3	F	2	2	..	..
III.	M	13	8	..	5	M	7	5	1	1
	F	9	7	1	1	F	3	2	1	..
	M & F	156	108	21	27	M & F	50	31	10	9

TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED)—continued

1925.

	No Tubercle Bacilli found.					*Tubercle Bacilli found.*				
Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1931	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1931	Lost sight of	Died
I.	M	30	24	5	1	M	19	12	2	5
	F	18	15	3	..	F	6	4	1	1
II.	M	30	20	8	2	M	13	9	1	3
	F	12	11	1	..	F	8	4	2	2
III.	M	7	5	..	2	M	4	2	..	2
	F	5	3	2	..	F	2	..	1	1
	M & F	102	78	19	5	M & F	52	31	7	14

1926.

I.	M	28	21	5	2	M	11	9	2	..
	F	22	15	7	..	F	4	4	..	..
II.	M	20	15	3	2	M	10	8	2	..
	F	7	5	2	..	F	2	2	..	..
III.	M	10	7	1	2	M	4	3	..	1
	F	2	2	..	..	F	..	..	..	..
	M & F	89	65	18	6	M & F	31	26	4	1

1927.

I.	M	22	18	2	2	M	6	5	..	1
	F	26	20	5	1	F	1	1	..	..
II.	M	13	11	..	2	M	14	11	3	..
	F	7	7	..	..	F	5	4	..	1
III.	M	6	5	..	1	M	3	3	..	..
	F	1	1	..	..	F	..	..	..	..
	M & F	75	62	7	6	M & F	29	24	3	2

1928.

I.	M	33	31	1	1	M	11	8	1	2
	F	28	23	5	..	F	5	4	..	1
II.	M	28	22	2	4	M	6	4	2	..
	F	15	13	2	..	F	2	2	..	..
III.	M	12	12	..	..	M	3	2	..	1
	F	3	3	..	..	F	3	3	..	..
	M & F	119	104	10	5	M & F	30	23	3	4

TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED)—continued

1929.

Stage	*No Tubercle Bacilli found.* Sex	Number of cases taken off Register	Number known to be still living at end of 1931	Lost sight of	Died	*Tubercle Bacilli found.* Sex	Number of Cases taken off Register	Number known to be still living at end of 1931	Lost sight of	Died
I.	M	34	30	2	2	M	8	8	..	..
	F	37	36	1	..	F	4	4	..	..
II.	M	24	21	2	1	M	9	6	2	1
	F	14	13	1	..	F	4	4	..	..
III.	M	9	7	2	..	M	5	3	1	1
	F	4	4	..	..	F	..	..	..	..
	M & F	122	111	8	3	M & F	30	25	3	2

1930.

I.	M	81	76	5	..	M	23	21	1	1
	F	44	37	6	1	F	4	2	2	..
II.	M	44	40	3	1	M	24	21	2	1
	F	22	20	2	..	F	13	12	..	1
III.	M	14	13	..	1	M	4	4	..	..
	F	7	7	..	..	F	1	1	..	..
	M & F	212	193	16	3	M & F	69	61	5	3

CROSSLEY AND BAGULEY SANATORIA.

Conditions relative to patients treated in the Crossley Sanatorium and Baguley Sanatorium during the last ten years are set forth in the following tables, Baguley Sanatorium is in the main an institution for advanced cases.

In addition to these, however, cases for observation are sent, and these may, if suitable, be transferred later to the other sanatoria at Delamere and Abergele.

The earlier the stage of the disease at which a patient can be given sanatorium treatment the greater the prospect of permanent arrest. Properly selected cases have their best chance of arrest in the shortest time by intelligently carried-out sanatorium treatment; moreover, they learn restraint, discipline and an ordered way of life, which are essential for maintenance of health and prevent relapses.

Table 7.

Crossley Sanatorium.

Males.

Year	No. of new cases	No. of re-admissions	Died in the Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1931
1922	115	28	2	60	22	31
1923	125	29	1	65	16	43
1924	114	32	2	53	20	39
1925	131	25	3	62	20	46
1926	107	44	..	49	16	42
1927	112	39	..	40	14	58
1928	122	27	..	41	12	69
1929	97	53	..	29	3	65
1930	88	35	..	14	3	71
1931	84	23	..	4	4	76
Total	1,095	335	8	417	130	540

TABLE 7—*continued.*

CROSSLEY SANATORIUM—*continued.*

Females.

Year	No. of new cases	No. of re-admissions	Died in the Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1931
1922	92	13	..	46	18	28
1923	121	24	1	66	16	38
1924	135	25	..	60	36	39
1925	111	33	1	49	23	38
1926	127	32	..	49	27	51
1927	140	24	..	45	24	71
1928	126	33	..	45	16	65
1929	139	22	..	27	22	90
1930	137	41	1	13	9	114
1931	136	49	1	4	1	130
Total	1,264	296	4	404	192	664

Table 8.

Baguley Sanatorium.

Males.

Year	No. of new cases	No. of re-admissions	Died in Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1931
1922	356	166	128	162	26	40
1923	365	151	117	159	41	48
1924	363	106	118	173	23	49
1925	326	88	123	122	19	62
1926	297	78	104	105	25	63
1927	307	84	96	102	21	88
1928	361	88	102	127	18	114
1929	355	83	116	104	26	109
1930	297	83	82	62	9	144
1931	264	87	48	12	..	204
Total	3,291	1,014	1,034	1,128	208	921

Females.

Year	No. of new cases	No. of re-admissions	Died in Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1931
1922	198	50	66	80	20	32
1923	188	38	68	85	20	15
1924	225	48	65	110	14	36
1925	199	35	71	74	25	29
1926	216	48	81	76	17	42
1927	185	50	57	79	16	33
1928	168	38	55	46	6	61
1929	207	59	78	46	6	77
1930	182	27	66	37	1	78
1931	146	28	24	7	1	114
Total	1,914	421	631	640	126	517

HOSPITALS.

INSTITUTIONS.

HOMES AND OTHER SPECIAL ESTABLISHMENTS.

CONVALESCENT HOMEWORK.

DISTRICT MEDICAL SERVICE.

PUBLIC VACCINATION.

RECOVERY OF HOSPITAL COSTS.

SECTION 1.

General Survey of Hospital, Institutional, etc., Activities.

The total number of beds in charge of the Public Health Committee is 9,234. These beds are distributed as shown in the subjoined statement :—

Establishments owned by City Council.

		Number of Beds.
Crumpsall Hospital		1,568
Withington Hospital		1,293
Booth Hall Hospital		760
Monsall Hospital		600
Clayton Hospital		50
Abergele Sanatorium	Children	210
	Adults	52
Baguley Sanatorium		333
Langho Colony		632
Swinton Home		144
Rose Hill Convalescent Home		123
Crumpsall Institution and Mental Wards		1,999
Withington Institution		1,200
Average total number of beds retained at Convalescent Homes during 1931		280

A general statement of the uses and scope of each of the above-mentioned establishments follows. The numbers in parenthesis after the name of each refer to the pages in Section 2 of this part of the report, where may be found the detailed statistics, tables, etc., relating to such establishment during the year 1931. In the following statement mention has been made of any new buildings, etc., added during the year.

Crumpsall Hospital (97).

This is the largest of the City hospitals. It contains 1,568 beds for the treatment of medical, surgical, and maternity cases. Consultants in gynæcology, midwifery, ophthalmology, surgery, dermatology, pathology, otology, and radiology attend regularly for the treatment of special cases. The hospital is a recognised training school for nurses. The main pathological laboratory for the City hospitals is housed at Crumpsall.

During 1931 the Public Health Committee approved of the establishment of a special clinic, known as the Mothers' Clinic, where information as to contraception may be given to married women who are recommended by their medical advisers to receive such information because of the danger to their health of further pregnancies.

The modernisation of the hospital wards has been continued during the year.

Towards the end of 1931 a rearrangement of nursing duties was effected in order to secure that patients should not be wakened before 7 a.m. This action has freed the hospital from a criticism (which is fairly general in the hospital world) that in order to allow the completion of necessary work, patients were disturbed at too early an hour. The new arrangement has been of considerable advantage to the patients, and has created no difficulties in ward management.

A new electric bed lift was installed during the year, and the first instalment of an important improvement in ward equipment was effected, viz., the provision of individual ward refrigerators. The latter provision ensures the preservation of the freshness of foods intended for patients' consumption to a higher degree than is possible with the use only of a central refrigerator and the wards so far equipped have benefited considerably from the innovation.

Special aluminium containers for the storage of milk in bulk were installed during 1931. For the first time also the milk supply of the hospital was required to be pasteurised. The milk now reaches the wards in much better condition, and the loss of milk from souring has been altogether eliminated.

Withington Hospital (100).

The functions of the Withington Hospital are similar to those of Crumpsall, and the staff of consulting physicians and surgeons also comparable. This hospital also is a training school for nurses. There are 1,220 beds and, as at Crumpsall, there are auxiliary wards for paying patients, the charge to whom is three guineas per week if the patient is a Manchester resident, and four guineas if the patient does not reside within the City.

A special "Mother's Clinic," similar to that at Crumpsall, is established at Withington under the control of a medical officer specially selected for this particular work.

All-round modernisation is proceeding here also, and good progress was made in this direction during 1931. Ward refrigerators and aluminium milk containers were installed. Pasteurised milk was used throughout the year with the same success as at Crumpsall. It was not found possible during the year to provide the new operating theatre referred to in the last annual report, but it is hoped that this will be effected at an early date.

During 1931 a combined boiler and incinerator was installed. This provision has solved the question of the disposal of soiled dressings and other hospital refuse normally difficult to get rid of satisfactorily.

Booth Hall Hospital (103) *and Rose Hill Convalescent Home* (104).

Booth Hall Hospital, built on high ground in the north of the City, is a general hospital for children. Patients are admitted up to the age of 16 years. Open-air pavilions are a feature of the hospital. Like Crumpsall and Withington, Booth Hall has a consultant staff for specialist services. It is a training school for nurses.

Towards the end of the year a scheme for the electrification of the main cooking equipment of the central kitchen of the hospital was approved. An essential part of this arrangement is a revision of the tariff for the whole of the electricity consumed in the hospital, which, it is said, will effect a saving of approximately £1,000 per annum. The work will be carried out during the current year.

The Rose Hill Convalescent Home receives patients from Booth Hall Hospital for convalescence from general medical and surgical conditions. The children are under the care of a specialist, and the ordinary duration of stay is approximately three weeks. Heart cases stay three months or longer —this convalescence forming an integral part of the scheme for dealing with children suffering from heart disease as carried out jointly by the City hospitals and the school medical service.

During 1931 the conversion of the lighting system from gas to electricity was effected.

Monsall Hospital.

This hospital for infectious diseases was founded in 1871 by the Board of Management of the Manchester Royal Infirmary. It was originally named the "House of Recovery" and had 132 beds for scarlet fever, typhus, smallpox, and enteric. In 1896 the Corporation was empowered to administer the hospital.

The hospital now has a resident medical staff of six, the necessary consulting staff, and a nursing staff of between 160 and 170.

New works in 1931 included an improved sewing room and clothing store and a modern refrigerating plant and milk storage equipment.

A full report of the year's work is to be found on pages 111 to 132.

Clayton Hospital.

The Clayton Hospital is reserved for the isolation and treatment of smallpox patients. It was not necessary to put the hospital into commission for this purpose during 1931.

The need of a new smallpox hospital for the City has for a considerable time been recognised by the Committee. The very undesirable environment of the existing hospital, its great divergence from the admitted standards of hospital provision, and the heavy annual cost of maintenance of the old buildings all demonstrate the necessity for action.

It is anticipated that a suitable site will be found and the initial steps taken during 1932.

Abergele Sanatorium.

The new children's sanatorium at Abergele was opened on June 23rd, 1931. This sanatorium provides accommodation for the treatment of children suffering from all types of tuberculosis. As formerly, provision is made for the accommodation of 52 tuberculous adults in original sanatorium at Plas Uchaf.

A full report of the year's work is to be found on pages 133 to 142.

Baguley Sanatorium.

Situate in the newly-incorporated area to the south of the City, this sanatorium receives for treatment 333 adult cases of pulmonary tuberculosis.

Extensions are contemplated which will add 100 beds to this number.

Authority was given in 1931 for work to be commenced on the new combined chapel and recreation room. This building will be adapted for the holding of religious services, and also for the presentation of stage and film entertainments. Talking-film apparatus is to be installed.

The handicraft section, introduced within recent years, is continuing to prove successful therapeutically and financially.

A full report of the year's work is to be found on pages 143 to 150.

Langho Colony (105).

This establishment provides accommodation for 632 epileptics of both sexes. Patients must have reached the age of 16 years. Cases are admitted from other local authorities upon contract in so far as places are available. The work of the colony has been attended during the year with the same remarkable degree of success as has characterised it for so many years. The incidence of fits in patients falls very rapidly under treatment, and remains at a consistently low level. The atmosphere of happiness in the whole establishment and of contented industry amongst the colonists is a matter of comment by both official and unofficial visitors. The occupational side of the treatment of the colonists not only contributes largely to this result, but is of equally great economic and therapeutic value. During 1931 the building of a new sewing room was commenced.

Swinton Home (109).

This home is reserved for mentally-defective children and post-encephalitic children. It is situate in the area of the Swinton and Pendlebury Urban District. Routine medical attendance is provided, and, in addition, consultant services are rendered by a children's specialist. In 1931 a new laundry was erected to allow of all the laundering for the Home being done there without the necessity which formerly existed for certain washing to be done by outside firms. The laundry work is now entirely done at the Home at a slightly lower cost than under the old arrangements.

Crumpsall Institution (including the *Mental Wards* (107).

Beds at Crumpsall Institution consist of two principal groups—

(1) For the accommodation of cases of mental disease.

(2) For the accommodation mainly of the aged and infirm poor.

The distribution of the beds and their user remains as was described in the report for 1930.

In 1931 work was begun on extensive alterations and additions to the mental wards. These will provide adequate sanitary and washing arrangements of modern type, the need for which is, and has been for some time, very acute. Provision has been made in the scheme also for the construction of two new padded rooms.

The reports of the visits paid by the representatives of the Board of Control express general satisfaction with the provision made for and the care taken of the mental patients.

Withington Institution (108).

As in the case of Crumpsall the work of this institution has been carried out on lines identical with those of last year with the single exception that a certain number of chronic patients have been transferred from the hospital to the institution in order to relieve pressure upon hospital accommodation, especially in the winter months. Suitable arrangements were made in connection with this transfer to ensure the wellbeing of the patients. The result is in every way satisfactory.

Recovery of Costs of Hospital Maintenance.

The cost of hospital maintenance is recovered according to the means of the patient or the patient's family. The assessment of the capacity to pay and the actual recovery of costs on this basis is effected by the Public Assistance Department. The assessment is based upon the information contained both in the Hospital and Public Assistance records of the case and

family. During the financial year ending March 31st, 1932, the amount so recovered reached a total of £41,483, which was made up as follows :—

From	Booth Hall	Crumpsall	Langho	Rose Hill	Withington
	£	£	£	£	£
Paying patients at a fixed weekly charge	358	4,500	—	—	8,794
Relatives and patients according to means ..	1,745	10,493	1,151	180	14,262

Convalescent Homes.

The individuals to whom this treatment is accorded are persons who require treatment in convalescent homes or special institutions of a type not provided and maintained by the City Council itself. Convalescent home treatment is accorded—

(*a*) On the recommendation of the consultants of the municipal hospitals.

(*b*) To cases recommended for such treatment by the district medical officers. Children's cases are referred to Dr. R. W. Marsden, Medical Superintendent, Crumpsall Hospital, who is specifically appointed for this duty. Each child is examined by him and the final recommendation made by him.

The transport of the cases is made by rail. Children are accompanied both from and to the convalescent homes by an officer of the department.

The following statement shows the average numbers of patients maintained in the convalescent homes used by the Corporation during the year endcd 31st December, 1931 :—

Name of Convalescent Home	Average Number Maintained
Dr. Garrett Memorial Home, Conway	183
Seabright House, St. Annes-on-Sea	15
Eastby Sanatorium, Skipton, Yorks.	7
St. Fechan's Sanatorium, Ecclefechan, Dumfriesshire	6
David Lewis Colony for Epileptics, Alderley Edge	1
St. Elizabeth's Home for Epileptics, Much Hadham, Herts. ..	1
Royal Alexandra Hospital, Rhyl	3
Hospital of St. John of God, Scorton, near Darlington	2
Children's Convalescent Home, West Kirby	30
Lear Home of Recovery, West Kirby	2
White Oak School, Swanley, Kent	2

Public Vaccination.

The number of public vaccinators is 25, and there are four vaccination officers.

The percentage of infants successfully vaccinated in Manchester—52·5 per cent.—remains considerably higher than in England and Wales as a whole. The percentages for each of the five years 1925–1929 were :—

	England and Wales	Manchester
1925	44·2	59·3
1926	44·8	60·0
1927	44·9	59·5
1928	42·6	55·0
1929	39·9	52·8

The following is a summary of the return made to the Ministry of Health of vaccinations for the year 1930 :—*

	Total	Percentage
Number of successful vaccinations	7,254	52·48
Number insusceptible of vaccination	50	0·36
Number of exemptions	3,974	28·76
Number died unvaccinated	904	6·55
Number not traceable : removed to other districts or postponed	1,636	11·85
Number of children born	13,818	100·00

* Returns for vaccination are always for the year preceding that of the actual date of report. This is unavoidable, since the period of four months from the date of birth is allowed for exemption purposes.

District Medical Service.

There are 26 medical relief districts in the City with 26 district medical officers—one to each district. The number of patients seen by these medical officers in 1931 numbered 30,184.

The work of this section of public medical service has greatly increased during the last 12 years, as the following figures show :—

Year	Number of Patients seen
1919	5,948
1925	15,582
1930	22,163
1931	30,184

Considerable dissatisfaction with the form of the medical service provided for this section of the public has frequently been expressed, and, on the instructions of the Public Health Committee, negotiations are now in progress for the formation of a scheme whereby this medical work will be reorganised.

SECTION 2.

Crumpsall Hospital—Statistics and Tables for 1931.

1. Number of resident medical staff	5
2. Number of visiting staff	8
3. Specialist services supplied	Surgeon, physician, gynecologist and obstetrician, ophthalmic surgeon, orthopædic surgeon, aurist and laryngologist, children's specialist, pathologist, dermatologist, radiologist, dentist.
4. Number of—	
(*a*) Trained nurses	75
(*b*) Probationer nurses	148
(*c*) Assistant nurses	48
(*d*) Male attendants	13
5. Total number of beds provided for sick and maternity cases at 31st December, 1931—	
(*a*) For men	610
(*b*) For women	780
(*c*) For children (under 16 years of age), excluding cots in maternity wards	60
Total	1,450

Table showing Classification of Accommodation and Number of Beds Occupied on 31st December, 1931.

Classification of Wards	Number of Wards	BEDS							
		Men		Women		Children (under 16 yearsofage)		Total	
		Provided	Occupied	Provided	Occupied	Provided	Occupied	Provided	Occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Medical	18	206	207	260	147	..	..	466	354
2. Surgical	8	170	102	124	96	..	..	294	198
3. Chronic sick	31	204	145	224	192	—	—	428	337
4. Children	1	—	—	—	—	48	18	48	18
5. Venereal	3	30	10	50	28	12	7	92	45
6. Maternity	6	—	—	122	67	—	—	122	67
Total	67	610	464	780	530	60	25	1450	1019

STATISTICS RELATING TO THE YEAR ENDED 31ST DECEMBER, 1931.

In-Patients.

1. Total number of admissions (including infants born in hospital)	11,003
2. Number of women confined in hospital	1,676
3. Number of live births	1,579
4. Number of still births	97
5. Number of deaths among the newly-born (*i.e.*, under four weeks of age)*	58
6. Total number of deaths among children under one year (including those given under five)	65
7. Number of maternal deaths among women confined in hospital	8
8. Total number of deaths	1,123
9. Total number of discharges (including infants born in hospital)	9,863
10. Duration of stay of patients included in 8 and 9 above—	
(*a*) Four weeks or less	8,020
(*b*) Exceeding four but under thirteen weeks	2,303
(*c*) Exceeding thirteen weeks	663
11. Number of beds occupied—	
(*a*) Average during the year	1,096
(*b*) Highest on February 24th, 1931	1,254
(*c*) Lowest on September 5th, 1931	967
12. Number of surgical operations under general anæsthetic (excluding dental operations)	1,190
13. Number of abdominal sections	284

* This figure relates only to children born in hospital.

Out-Patients.

1. Nature and scope of the out-patient provision for continuation of treatment, emergency treatment, consultations or otherwise	Massage, radiant heat, diathermy, electrical treatment, Insulin, sunlight, and X-ray treatment given to cases who have been, or may become, in-patients.
2. Total number of persons seen in the out-patient department	734
3. Number of these persons who were subsequently admitted for in-patient treatment in the Institution	60
4. Number of these persons who had received in-patient treatment in the Institution	701
5. Total number of attendances in the out-patient department	11,341
6. Number of women seen and the total number of attendances at Ante-natal Clinic	1,638 women, 12,682 attendances

Classification of In-Patients who were Discharged from or who Died in the Institution during the Year ended 31st December, 1931.

Disease Groups	Children (under 16 years of age)		Men and Women	
	Discharged	Died	Discharged	Died
Acute infectious disease	6	..	52	..
Influenza	..	..	34	10
Tuberculosis—				
Pulmonary	..	..	55	8
Non-Pulmonary	..	..	35	8
Malignant disease	..	..	112	26
Rheumatism—				
(1) Acute rheumatism (rheumatic fever), together with sub-acute rheumatism and chorea	..	..	48	7
(2) Non-articular manifestations of so-called "rheumatism" (muscular rheumatism, fibrositis, lumbago, and sciatica)	..	..	212	11
(3) Chronic arthritis	..	..	78	..
Venereal disease	41	3	427	..
Puerperal pyrexia	..	..	22	..
Puerperal fever—				
(*a*) Women confined in the hospital	..	..	3	1
(*b*) Admitted from outside	..	..	16	..
Other diseases and accidents connected with pregnancy and child-birth	..	..	379	21
Accidental injury and violence	..	..	160	13
In respect of cases not included above :				
Disease of the Nervous System and Sense Organs	..	..	305	41
,, ,, Respiratory System	..	..	1,081	224
,, ,, Circulatory System	..	..	295	147
,, ,, Digestive System	..	..	620	75
,, ,, Genito-urinary System	..	..	323	34
,, ,, Skin	..	..	1,037	56
Other diseases	147	16	861	357
Mothers and infants discharged from maternity wards and not included in above figures—				
Mothers	..	..	1,985	7
Infants	1,529	58	..	..
Totals	1,723	77	8,140	1,046

Withington Hospital—Statistics and Tables for 1931.

1. Number of resident medical staff	6
2. Number of visiting staff	12
3. Specialist services supplied	Surgeon, physician, gynecologist and obstetrician, ophthalmic surgeon, orthopædic surgeon, aurist and laryngologist, children's specialist, pathologist, dermatologist, radiologist, tuberculosis specialist, and dentist.
4. Number of—	
(*a*) Trained nurses	102
(*b*) Probationer nurses	182
(*c*) Assistant nurses	12
(*d*) Male nurses	7
5. Total number of beds provided for sick and maternity cases at 31st December, 1931—	
(*a*) For men	496
(*b*) For women	640
(*c*) For children (under 16 years of age), excluding cots in maternity wards..	84
Total ..	1,220

I.

Table showing Classification of Accommodation and Number of Beds Occupied on 31st December, 1931.

Classification of Wards	Number of Wards	BEDS							
		Men		Women		Children (under 16 yearsofage)		Total	
		Provided	Occupied	Provided	Occupied	Provided	Occupied	Provided	Occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Medical	7	77	84	115	94	..	..	192	178
2. Surgical	10	110	75	147	64	..	..	257	139
3. Chronic sick ..	30	183	156	241	210	..	..	424	366
4. Children	1	—	—	—	—	20	10	20	10
5. Tuberculosis ..	5	126	85	42	29	..	..	168	114
6. Isolation	9	..	..	..	..	64	..	64	..
7. Maternity ..	4	—	—	95	56	—	—	95	56
Total ..	66	496	400	640	453	84	10	1220	863

II.

Statistics relating to the Year ended 31st December, 1931.

In-Patients.

1. Total number of admissions (including infants born in hospital)	11,970
2. Number of women confined in hospital	1,370
3. Number of live births	1,284
4. Number of still-births	96
5. Number of deaths among the newly-born (*i.e.*, under four weeks of age)*	42
6. Total number of deaths among children under one year (including those given under 5)	69
7. Number of maternal deaths among women confined in hospital	14
8. Total number of deaths	1,734
9. Total number of discharges (including infants born in hospital)	10,249
10. Duration of stay of patients included in 8 and 9 above—	
(*a*) Four weeks or less	8,268
(*b*) Exceeding four weeks but under thirteen weeks	2,616
(*c*) Exceeding thirteen weeks	1,099
11. Number of beds occupied—	
(*a*) Average during the year	987
(*b*) Highest on February 14th, 1931	1,091
(*c*) Lowest on December 25th, 1931	859
12. Number of surgical operations under general anæsthetic (excluding dental operations)	1,356
13. Number of abdominal sections	420

* This figure relates only to children born in hospital.

Out-Patients.

1. Nature and scope of the out-patient provision for continuation of treatment, emergency treatment, consultations, or otherwise	Massage, radiant heat, diathermy, electrical treatment, Insulin, sunlight, and X-ray treatment given to cases who have been, or may become, in-patients.
2. Total number of persons seen in the out-patient department	474
3. Number of these persons who were subsequently admitted for in-patient treatment in the Institution	1
4. Number of these persons who had received in-patient treatment in the Institution	344
5. Total number of attendances in the out-patient department	12,059
6. Number of women seen and the total number of attendances at Ante-natal Clinic	1,092 women, 3,595 attendances

Classification of In-Patients who were Discharged from or who Died in the Institution during the Year ended 31st December, 1931.

Disease Groups	Children (under 16 years of age)		Men and Women	
	Discharged	Died	Discharged	Died
Acute infectious disease	1	1	176	64
Influenza	1	..	148	12
Tuberculosis—				
Pulmonary	..	..	601	251
Non-Pulmonary	..	..	33	..
Malignant disease	..	..	196	192
Rheumatism—				
(1) Acute rheumatism, rheumatic fever, together with sub-acute rheumatism and chorea	..	..	90	4
(2) Non-articular manifestations of so-called "rheumatism" (muscular rheumatism, fibrositis, lumbago, and sciatica)	..	..	112	5
(3) Chronic arthritis	..	..	70	17
Venereal disease. (All transferred to Crumpsall Hospital)	..	..	78	..
Puerperal pyrexia	..	..	4	..
Puerperal fever—				
(*a*) Women confined in the hospital	..	..	2	..
(*b*) Admitted from outside	..	..	..	..
Other diseases and accidents connected with pregnancy and child-birth	..	..	434	7
Senile decay	..	..	55	20
Accidental injury and violence	2	..	459	32
In respect of cases not included above :				
Disease of the Nervous System and Sense Organs	5	2	275	71
,, ,, Respiratory System	13	10	1,725	365
,, ,, Circulatory System	13	12	537	214
,, ,, Digestive System	3	1	618	50
,, ,, Genito-urinary System	2	..	325	55
,, ,, Skin	2	2	252	16
Other diseases	1	22	1,501	289
Mothers and infants discharged from maternity wards and not included in above figures—				
Mothers	..	..	1,273	..
Infants	1,242	20	..	..
Total	1,285	70	8,964	1,664

Booth Hall Hospital—Statistics and Tables for 1931.

1. Number of resident medical staff	6
2. Number of visiting staff	9
3. Specialist services supplied	Surgeon, ophthalmic surgeon, orthopædic surgeon, aurist and laryngologist, children's specialist, pathologist, dermatologist, radiologist, and dentist.
4. Number of—	
(*a*) Trained nurses	47
(*b*) Probationer nurses	106
(*c*) Assistant nurses	19
(*d*) Non-resident nurse attendants ..	18
5. Total number of beds provided for sick, maternity, and mental cases at 31st December, 1931—	
(*a*) For men	..
(*b*) For women	..
(*c*) For children (under 16 years of age), excluding cots in maternity wards..	760
Total ..	760
6. Number of beds occupied on 31st December, 1931	644

Statistics relating to the Year ended 31st December, 1931.

In-Patients.

1. Total number of admissions	4,993
2. Total number of deaths among children under one year ..	253
3. Total number of deaths	487
4. Total number of discharges	4,436
5. Duration of stay of patients included in 3 and 4 above—	
(*a*) Four weeks or less	2,883
(*b*) Exceeding four weeks but under thirteen weeks.. ..	1,508
(*c*) Exceeding thirteen weeks	532
6. Number of beds occupied—	
(*a*) Average during the year..	601
(*b*) Highest on February 18th, 1931	679
(*c*) Lowest on August 16th, 1931	504
7. Number of surgical operations under general anæsthetic (excluding dental operations)	2,079
8. Number of abdominal sections	113

Out-Patients.

Nature and scope of the out-patient provision for continuation of treatment, emergency treatment, consultations, or otherwise.	X-ray examination.

Classification of In-Patients who were Discharged from or who Died in the Institution during the Year ended 31st December, 1931.

Disease Groups	(Children under 16 years of age)	
	Discharged	Died
Acute infectious disease	438	194
Influenza	15	9
Tuberculosis—		
Pulmonary	40	15
Non-Pulmonary	69	28
Malignant disease	1	3
Rheumatism—		
(1) Acute rheumatism (rheumatic fever), together with sub-acute rheumatism and chorea	215	10
(2) Non-articular manifestations of so-called "rheumatism" (muscular rheumatism, fibrositis, lumbago, and sciatica)	3	..
Venereal disease	17	4
Mental diseases	17	..
Accidental injury and violence	189	9
In respect of cases not included above :		
Disease of the Nervous System and Sense Organs	147	16
,, ,, Respiratory System	559	31
,, ,, Circulatory System	36	7
,, ,, Digestive System	235	119
,, ,, Genito-urinary System	78	3
,, ,, Skin	277	4
Other diseases	2,100	35
Total	4,436	487

Rose Hill Convalescent Home—Statistics and Tables for 1931.

1. Number of Visiting staff	1 (specialist).	
2. Number of trained nurses	3	
3. Total number of beds provided for convalescent cases at 31st December, 1931—		
(*a*) For men	..	
(*b*) For women	..	
(*c*) For children (under 16 years of age), excluding cots in maternity wards	123	
Total	123	

I.

TABLE SHOWING CLASSIFICATION OF ACCOMMODATION AND NUMBER OF BEDS OCCUPIED ON 31ST DECEMBER, 1931.

Classification of Wards	Number of Wards	BEDS							
		MEN		WOMEN		CHILDREN (under 16 years of age)		Total	
		Provided	Occupied	Provided	Occupied	Provided	Occupied	Provided	Occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Convalescent ..	..	..	..	..	..	..	..	120	105
2. Isolation	..	..	..	..	..	..	..	3	..
TOTAL ..	..	..	..	..	..	..	..	123	105

STATISTICS RELATING TO THE YEAR ENDED 31ST DECEMBER, 1931.

In-Patients.

1. Total number of admissions	1,138
2. Total number of discharges	1,146
3. Duration of stay of patients—	
(*a*) Four weeks or less	1,100
(*b*) Exceeding four weeks but under thirteen weeks ..	34
(*c*) Exceeding thirteen weeks	12
4. Number of deaths	Nil
5. Number of beds occupied—	
(*a*) Average during the year..	104
(*b*) Highest on July 23rd, 1931	138
(*c*) Lowest on June 24th, 1931	62

LANGHO COLONY—STATISTICS AND TABLES FOR 1931.

1. Number of resident medical staff		1
2. Number of—		
(*a*) Trained nurses		1
(*b*) Attendant nurses		33
(*c*) Male attendants		30
3. Total number of beds provided for epileptic cases at 31st December, 1931		
(*a*) For men		297
(*b*) For women		330
(*c*) For children (under 16 years of age), excluding cots in maternity wards		..
	Total ..	627

I.

TABLE SHOWING CLASSIFICATION OF ACCOMMODATION AND NUMBER OF BEDS OCCUPIED ON 31ST DECEMBER, 1931.

Classification of Wards	Number of Wards	BEDS							
		MEN		WOMEN		CHILDREN (under 16 yearsofage)		Total	
		Provided	Occupied	Provided	Occupied	Provided	Occupied	Provided	Occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	10
Epileptics	11 Homes	297	297	330	330	..	..	627	627
TOTAL ..	11	297	297	330	330	..	..	627	627

STATISTICS RELATING TO THE YEAR ENDED 31ST DECEMBER, 1931.

In-Patients.

1. Total number of admissions 78
2. Total number of deaths 18
3. Total number of discharges (including infants born in hospital) 53
4. Duration of stay of patients included in 2 and 3 above—
   (*a*) Four weeks or less 8
   (*b*) Exceeding four weeks but under thirteen weeks .. 7
   (*c*) Exceeding thirteen weeks 56
5. Number of beds occupied—
   (*a*) Average during the year.. 622
   (*b*) Highest on 4th December, 1931 629
   (*c*) Lowest on 4th March, 1931 617

Classification of In-Patients who were Discharged from or who Died in the Institution during the Year ended 31st December, 1931.

Disease Groups	Children (under 16 years of age)		Men and Women	
	Discharged	Died	Discharged	Died
Non-pulmonary tuberculosis	..	..	..	1
Malignant disease	..	..	..	1
In respect of cases not included above :				
Disease of the Respiratory System	..	..	..	4
,, ,, Circulatory System	..	..	..	3
Epilepsy	..	..	53	9
Total	..	..	53	18

Crumpsall Institution (Mental Wards)—Statistics and Tables for 1931.

1. Number of—		
(*a*) Superintendents		2
(*b*) Assistant superintendents		4
(*c*) Charge attendants		8
(*d*) Mental nurses		32
(*e*) Mental attendants		62
2. Total number of beds available in the Institution for mental cases at 31st December, 1931—		
(*a*) For men		333
(*b*) For women		342
(*c*) For chidlren (under 16 years of age), excluding cots in maternity wards..		..
	Total ..	675

I.

Table showing Classification of Accommodation for Mental Cases and Number of Beds Occupied on 31st December, 1931.

Classification of Wards	Number of Wards	BEDS							
		Men		Women		Children (under 16 yearsofage)		Total	
		Provided	Occupied	Provided	Occupied	Provided	Occupied	Provided	Occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Mental—	..	333	..	342	..	..	..	..	..
(i.) Short stay ..	..	..	8	..	11	..	..	..	19
(ii.) Long stay ..	..	..	279	..	313	..	2	675	594
2. Mental defectives	..	..	14	..	..	..	1	..	15
3. Sane epileptics..	..	..	1	..	3	..	3	..	7
Total ..	..	333	302	342	327	..	6	675	635

Statistics relating to the Year ended 31st December, 1931.

In-Patients.

1. Total number of admissions (including infants born in hospital)	967
2. Number of women confined	1
3. Total number of deaths	264
4. Total number of discharges (including infants born in hospital)	724
5. Duration of stay of patients included in 3 and 4 above—	
(*a*) Four weeks or less	618
(*b*) Exceeding four weeks but under thirteen weeks	136
(*c*) Exceeding thirteen weeks	234
6. Number of beds occupied—	
(*a*) Average during the year..	643
(*b*) Highest on September 7th, 1931	678
(*c*) Lowest on April 26th, 1931	617

Classification of In-Patients who were Discharged from or who Died in the Institution during the Year ended 31st December, 1931.

Disease Groups	Children (under 16 years of age)		Men and Women	
	Discharged	Died	Discharged	Died
Mental diseases—				
(*a*) Senile dementia	..	..	..	122
(*b*) Other	7	..	673	126
Accidental injury and violence	..	..	43	16
In respect of cases not included above :				
Infants discharged from mental wards and not included in above figures	1	..	..	..
Total	8	..	716	264

Withington Institution (Aged and Infirm Wards)—Statistics and Tables for 1931.

1. Number of—	
(*a*) Trained nurses	3
(*b*) Attendants	48
2. Total number of beds provided in the Institution for sick (aged and infirm) cases, at 31st December, 1931—	
(*a*) For men	190
(*b*) For women	190
(*c*) For children (under 16 years of age), excluding cots in maternity wards	..
Total ..	380

I.

Table showing Classification of Accommodation and Number of Beds Occupied on 31st December, 1931.

Classification of Wards	Number of Wards	BEDS							
		Men		Women		Children (under 16 yearsofage)		Total	
		Provided	Occupied	Provided	Occupied	Provided	Occupied	Provided	Occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Chronic sick	2 large Blocks, 3 floors each	190	178	190	175	..	..	380	353

STATISTICS RELATING TO THE YEAR ENDED 31ST DECEMBER, 1931.

In-Patients.

1. Total number of admissions (including infants born in hospital)	155
2. Total number of deaths	74
3. Total number of discharges	79
4. Duration of stay of patients included in 2 and 3 above—	
(*a*) Four weeks or less	3
(*b*) Exceeding four weeks but under thirteen weeks	12
(*c*) Exceeding thirteen weeks	138
5. Number of beds occupied—	
(*a*) Average during the year	355
(*b*) Highest on March 1st, 1931	370
(*c*) Lowest on June 7th, 1931	348

SWINTON HOME—STATISTICS AND TABLES FOR 1931.

1. Number of visiting staff	1 (specialist).	
2. Number of—		
(*a*) Trained nurses		3
(*b*) Female mental attendants		23
3. Total number of beds provided in the Institution for mental deficiency cases at 31st December, 1931—		
(*a*) For men		..
(*b*) For women		..
(*c*) For children (under 16 years of age), excluding cots in maternity wards		144
	Total	144

I.

TABLE SHOWING CLASSIFICATION OF ACCOMMODATION AND NUMBER OF BEDS OCCUPIED ON 31ST DECEMBER, 1931.

Classification of Wards	Number of Wards	BEDS							
		MEN		WOMEN		CHILDREN (under 16 years of age)		Total	
		Provided	Occupied	Provided	Occupied	Provided	Occupied	Provided	Occupied
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
						M.D. ENC.	M.D. ENC.	M.D. ENC.	M.D ENC.
Mental defectives ..	8	..	..	..	..	72 72	130 10	72 72	130 10

STATISTICS RELATING TO THE YEAR ENDED 31ST DECEMBER, 1931.

In-Patients.

1. Total number of admissions (including infants born in hospital)	37
2. Total number of deaths	4
3. Total number of discharges	30
4. Duration of stay of patients included in 2 and 3 above—	
(*a*) Four weeks or less	5
(*b*) Exceeding four weeks but under thirteen weeks	1
(*c*) Exceeding thirteen weeks	28
5. Number of beds occupied—	
(*a*) Average during the year	140
(*b*) Highest on June 30th, 1931	145
(*c*) Lowest on January 16th, 1931	134

PATHOLOGICAL LABORATORY, CRUMPSALL HOSPITAL.

SUMMARY OF EXAMINATIONS MADE FROM 1ST JANUARY, 1931, TO 31ST DECEMBER, 1931.

	Crumpsall Hospital	Booth Hall Infirmary	Withington Hospitals	Total for all Hospitals
Diphtheria tests	34	5,831	111	5,976
Sputum tests for tubercle bacilli	1,175	141	2,131	3,447
Hairs, etc., for ringworm parasites	Nil	124	2	126
Gonococcus smears	1,736	83	175	1,994
Blood—				
For Wassermann reaction	1,064	99	477	1,640
Count, etc.	149	14	129	292
Sugar estimation	335	9	1,357	1,701
Urea estimation	107	22	254	383
Culture	9	4	22	35
Typhoid	29	6	20	55
Urine—				
Microscopical examinations	497	90	155	742
Cultural examinations	1,129	93	187	1,409
Chemical examinations	94	146	142	382
Fæces—				
Microscopical examinations	7	22	28	57
Cultural examinations	30	76	29	135
Cerebro-spinal fluid—				
Microscopical examinations	59	195	123	377
Cultural examinations	11	27	17	55
Chemical examinations	40	80	96	216
Pus—				
Microscopical examinations	90	203	140	433
Cultural examinations	41	250	161	452
Exudates, effusions—				
Microscopical examinations	44	40	67	151
Cultural examinations	2	Nil	1	3
Tumours	180	90	253	523
Milks	13	28	19	60
Vaccines	297	33	120	450
Miscellaneous	57	24	316	397
	7,229	7,730	6,532	21,491

Milks, bacteriological examinations, from :—	
The Colony, Langho	7
Styal Cottage Homes	2
Diphtheria tests of swabs from :—	
Rose Hill Convalescent Home	91
Swinton Schools	20
	21,611

Under the heading "Miscellaneous" are included the following :—

Basal metabolic rate estimations, fractional test meals, occult blood tests, serum cholesterol estimations, serum calcium, blood-grouping, supply of hæmagglutinating sera to hospitals, enzyme estimations, blood coagulation times, bleeding times, sterilisation tests, and others.

MONSALL HOSPITAL.

Report by D. Sage Sutherland, M.D., Medical Superintendent.

At the close of the year 1930 532 patients remained in hospital. During 1931 4,240 were admitted. The total number under treatment during the year was 4,772. There were 149 deaths and 4,186 were discharged cured.

437 remained in hospital at the end of the year. The admissions showed a decrease on the previous year of 641.

The largest number of cases admitted to hospital was during the month of October, when 407 cases were received. The maximum number of patients in hospital was 532, on January 1st, 1931, and the minimum number was 260, on the 30th August, 1931.

The average daily number of patients in hospital for the year was 397·8, as against 471·04 in the year 1930.

The average duration of stay for each patient was 34·9 days, as against 36·01 in 1930.

The fatality rate for all cases under treatment was 3·44 per cent., as as compared with 3·85 during 1930.

The 298 cases, or 6·87 per cent., the diagnosis was altered from the certified disease.

SCARLET FEVER.

368 cases remained in hospital at the end of the previous year, and during the year 2,513 were admitted, showing a decrease of 363 on the previous year. The number of discharges was 2,642, and 10 deaths occurred during the year, giving a death rate of 0·38 per cent. During the previous year the death rate was 0·47 per cent.

The average stay in hospital was 37·3 days, showing a reduction of 0·2 days on the previous year. The average number of days in hospital of fatal cases was 18·7.

The treatment of scarlet fever, during the acute stage, by the intramuscular administration of anti-scarlatinal serum at the earliest possible time has been continued in all except the mildest type of case.

The complications show an increase in the occurrence of middle ear disease, otitis media occurring in 10 per cent. of cases as against 7·9 in the previous year.

Toxic nephritis following scarlet fever showed a reduction to 5 per cent., as against 6·4 in the previous year. The continued lessened incidence of this complication is attributable to the use of scarlet fever antiserum in lessening the toxic effects of the disease.

Aural Report.

Among 2,513 cases of scarlet fever admitted to the hospital in the year 1931 the number of cases of otorrhœa was 264, a case incidence of 10·5 per cent. Mastoid drainage was required in 20 cases, being an incidence of ·80 per cent of scarlet fever cases and 7·6 per cent. of cases of otorrhœa. These proportions vary very little from the preceding years.

During the year 165 cases were admitted for special treatment to the Aural Ward, the number remaining at the end of the year being 22. The accommodation of the Aural Ward was severely taxed from February to April, when supplementary accommodation for ear treatment had to be arranged.

Of the above cases, 112 were unilateral, 44 were bilateral, and 9 were recurrences or exacerbations of chronic pre-scarlatinal otitis.

The average day of onset of otorrhœa was the 18th, and the average duration of otorrhœa was 37 days.

The treatment of otitis continued to be essentially conservative, the main object being the provision of free drainage, improvement of resistance, and the lessening of naso-pharyngeal sepsis. The occurrence of otorrhœa coincided with a marked generally increased incidence of sepsis, there being in these cases a relatively high incidence of naso-pharyngeal sepsis, suppurative adenitis, and secondary abscess formation generally. In many cases the otitis improved only with a general improvement in nutrition.

The incidence was unaffected by antiscarlatinal serum, a large percentage (44 in 165) having received this on admission. The age incidence was somewhat lower than that of the parent disease, 55 per cent. of cases occurring in the age group 2 to 5 years.

Operations performed by the Aural Surgeons.

Mastoid drainage—

Unilateral	19
Bilateral	1
Paracenteses	4
Paracentesis plus proof puncture of maxillary antrum	1
Removal of tonsils and adenoids—	
For resistant otorrhœa	11
For resistant diphtheria carriers (from diphtheria and special isolation wards)	10
Wilde's incisions (two of these subsequently required mastoid drainage)	8

Mastoid Operations.

Among the 20 cases the average day of disease at which mastoid drainage was required was the 24th, and the average duration of aural discharge after operation was 44 days.

Deaths in Aural Cases.

One case (2yrs. 4mths.) died eleven days after a bilateral mastoid drainage operation, the mastoiditis occurring as part of a generallised spreading septic infection, culminating in septicæmia with acute nephritis on the 37th day of scarlet fever.

In addition, three deaths occurred from causes unconnected with aural disease, one of streptococcal septicæmia (2yrs.), one of broncho-pneumonia (2yrs. 8mths.), and one of acute nephritis terminating in uræmia, admitted to the hospital as such on the 19th day of the disease, and dying on the 21st day of scarlet fever.

Scarlet Fever Return Cases.

The number of cases of scarlet fever discharged from hospital during the year 1931 was 2,652. The number of true return cases for the year was 118, the return case rate being, therefore, 4·5 per cent., as against 3·3 per cent. for 1930.

The average duration of stay of cases giving rise to secondary cases was 36·73 days. The average interval elapsing between the discharge of the primary case from hospital and the onset of the disease in the secondary case was 10·66 days.

Return cases infected in 1st week of primary cases' discharge 35 per cent.

,,	,,	2nd	,,	,,	40 ,,
,,	,,	3rd	,,	,,	16 ,,
,,	,,	4th	,,	,,	9 ,,

2 cases gave rise to 3 return cases each.

20 ,, ,, ,, 2 ,, ,, ,,

96 ,, ,, ,, 1 ,, ,, ,,

Age Distribution of Infecting Cases.

	Discharges	Infecting Cases	Percentage
Under 1 year	14	2	14·3
1— 4 years	670	36	5·4
5— 9 ,, ...	1,186	58	4·9
10—14 ,, ...	460	17	3·7
15—19 ,, ...	137	2	1·5
20+	185	3	1·6

1931	Discharges	Return Cases	Percentage
January	310	13	4·2
February	203	8	3·9
March	237	14	5·9
April	261	7	2·7
May	224	9	4·0
June	267	10	3·7
July	215	9	4·2
August	189	6	3·2
September	145	8	5·5
October	195	6	3·1
November	190	12	6·3
December	206	16	7·8
	2,642	118	4·5

Minimum, 2·7 per cent., April. Maximum, 7·8 per cent., December.

The total number of scarlet fever cases receiving scarlatinal antitoxin on admission was 900. 55 cases which were serum treated were responsible for return cases. The return case rate for serum treated cases is thus 6·1 per cent.

Out of the 118 infecting cases—

In 76 the tonsils were normal,
„ 37 „ „ enlarged, and
„ 5 „ „ very enlarged.

In 42 per cent. no condition was found present after discharge to which infection could be attributed.

In 21 per cent. no discharge was noted to be present, but desquamation had not been completed.

The conditions apparently responsible for infection were :—

Rhinorrhœa	28 cases.
Otorrhœa	3 „
Sore throat	3 „
Skin conditions	4 „
Adenitis	1 case.
Tonsillitis	1 „

TOTAL SCARLET FEVER CASES—2,652.

Age Incidence	Number	Percentage
0—5 years	684	25·8
5—10 „	1,186	44·7
10—15 „	460	17·3
15—20 „	137	5·2
20 + ...	185	6·9

COMPLICATIONS IN SCARLET FEVER.

Complication	Number	Percentage
Rhinorrhœa in Convalescence	233	8·8
Otorrhœa	264	10·0
Nephritis	32	1·2
Albuminuria in Convalescence	102	3·8
Adenitis and Abscess	18	·7
Endocarditis	7	·3

ACTIVE IMMUNIZATION AGAINST SCARLET FEVER IN DICK POSITIVE REACTORS ADMITTED TO HOSPITAL SUFFERING FROM DIPHTHERIA.

Age	Total	+ ve	Percentage + ve	—ve	Completely Immunized	Incompletely Immunized or not Retested on Discharge
0— 1	19	8	42·1	11	2	6
1— 2	38	20	52·6	18	7	13
2— 3	45	17	37·8	28	11	6
3— 4	46	21	45·7	25	13	8
4— 5	67	33	49·3	34	26	7
5—10	265	137	52·1	128	86	51
10—15	110	40	36·4	70	20	20
15—20	36	10	27·8	26	7	3
20 + ...	66	12	18·2	54	5	7
	692	298	43·1	394	177	121

DIPHTHERIA

The number of patients admitted was 616, as against 829 in 1930, showing a decrease of 213. There were 568 discharges and 45 deaths. 18 deaths occurred within 48 hours of admission. The gross fatality rate was 7·34 per cent., as against 5·2 during the previous year, or 4·5 excluding the 18 deaths referred to.

The average stay in hospital of the patients who recovered was 38·4 days, and for fatal cases 5·9 days. 126 cases certified diphtheria were found to be suffering from some other disease. Of these cases 7 proved fatal.

Tracheotomy was performed in 20 cases, as against 27 in the previous year. 35 per cent. were fatal, as against 40·7 in 1930.

Intravenous Serum Treatment of Diphtheria.

During the year many cases of a severe type of diphtheria were admitted, the malignancy of which was manifested by rapid extension of membrane formation, glandular involvement (bull neck), and associated profound toxæmia.

In the 616 admissions, 97 cases were of this severe type, the average day of admission of which in the cases which recovered was 3·9, and in those which died, the 4th.

Total number of cases treated with intravenous antidiphtheritic serum	97
Recoveries	71
Deaths	26
Case mortality	26·8 per cent.

Seven deaths occurred within 48 hours, and 1 other death was recorded in a case of combined laryngeal and faucial diphtheria, in which tracheotomy was performed.

Excluding cases which were fatal within 48 hours, the death rate in this group was 19·6 per cent. Having regard to the high fatality rate in such cases, this low rate was attributable to the more rapid effect of intravenous serum introduced in large doses on admission to hospital. It was noticeable that the majority of the fatal cases survived beyond the most acute period of the illness.

Fatal cases. Day of disease on which death occurred :—

Day	Cases	Day	Cases
Fourth	2	Eleventh	2
Fifth	3	Twelfth	2
Sixth	4	Thirteenth	1
Seventh	3	Fourteenth	2
Eighth	1	Seventeenth	1
Ninth	1	Forty-first	1
Tenth	3		

(Average—9th day.)

It will be noted that, with the exception of 1 case, all deaths occurred within the first 17 days—the cause of death in each case was toxæmia and cardiac failure. The case that survived till the 41st day of disease succumbed to late paralyses (pharyngeal and diaphragmatic).

As indicative of the severity of these cases during the year 1931, it was found that of the 71 cases that recovered 39 (55 per cent.) developed post-diphtheritic paralysis. Single paralysis occurred in 27 cases—in 12, multiple paralyses were noted. The most frequent paralysis was palatal palsy (21 cases). The other single paralyses were :—

Ciliary	4
Ocular	2

Among the cases exhibiting multiple paralyses, pharyngeal involvement occurred in 4 cases—in 2 cases this was associated with diaphragmatic paralysis.

	Average Day of Disease on Admission	Average Dose of Serum. Intra-venous	Average Dose of Serum. Intra-muscular	Average Total Dose. Intravenous and Intra-muscular
Recoveries	3·9	54,000	37,400	91,400
Deaths	4	63,000	50,000	113,000

The average duration of residence in hospital in this group of the recovered cases was 67 days.

The maximum single intravenous dose given was 80,000 units: the maximum total given by the intravenous route was 140,000, and the maximum total given by combined intravenous intramuscular injection was 176,000. Both these maxima were administered to cases which ultimately proved fatal.

In a number of cases the intravenous route alone was employed, but, subsequently, cases received serum by intravenous and intramuscular routes, the intramuscular being given about four hours prior to the intravenous injection. Severe immediate reactions to serum were noted in a very few cases, which responded almost immediately to hypodermic injection of adrenalin.

In 2 of the recoveries a superadded streptococcal infection was present, and both cases received antiscarlatinal in addition to antidiphtheritic serum intravenously.

At the latter end of the year the addition of glucose insulin therapy was adopted and tried in a small series of cases—9. Of these, 2 recovered and 7 died. It may be stated that only the most severe type of infection was selected for this new treatment.

Laryngeal Diphtheria.

Thirty-three cases of diphtheria were admitted during 1931 in which laryngeal involvement was present. Of these, 21 exhibited both faucial and laryngeal symptoms, and in 11 the larynx alone was involved. There was in addition 1 case of measles and laryngeal diphtheria.

The number of cases in which tracheotomy was performed was 20, the lowest number which has ever been recorded.

TRACHEOTOMY CASES.

	Cases	Deaths
Under 1 year	1	1
1—2 years	..	..
2—3 „	4	1
3—4 „	2	2
4—5 „	5	0
5+ „	8	3
Total	20	7
Mortality Rate	35 per cent.	

ACTIVE IMMUNIZATION AGAINST DIPHTHERIA IN SCHICK POSITIVE REACTORS ADMITTED TO HOSPITAL SUFFERING FROM SCARLET FEVER.

Age	Total	+ ve	Percentage + ve	— ve	Completely Immunized	Incompletely Immunized or not Retested on Discharge
0— 1	12	2	16·6	10	1	1
1— 2	78	28	35·9	50	22	6
2— 3	164	51	31·1	113	40	11
3— 4	204	75	36·8	129	58	17
4— 5	240	88	36·6	152	67	21
5—10	1,188	330	27·8	858	292	38
10—15	456	79	17·3	377	62	17
15—20	158	32	20·3	126	25	7
20 + ...	186	24	12·9	162	19	5
	2,686	709	26·4	1,977	586	123

Total Diphtheria Cases—613.

Age Incidence	Number	Percentage
0— 5 years	181	29·5
5—10 ,, ...	254	41·4
10—15 ,, ...	94	15·3
15—20 ,, ...	32	5·2
20 + ...	52	8·5

Complications in Diphtheria.

Complication	Number	Percentage
Otitis Media	31	5·1
Palatal Paresis	33	5·4
Pharyngeal Paralysis	8	1·3
Diaphragmatic Paralysis	2	·3
Ciliary Paralysis	4	·6
Cardiac Arrythmia	12	2·0
Strabismus	8	1·3
Ptosis	1	·2
Severe Albuminuria or Nephritis	9	1·5
Mastoid Operation	2	·3
Adenitis	12	2·0

ENTERIC FEVER GROUP.

In hospital at commencement of year	—
Admitted during year	19
Incorrectly diagnosed	7
Remaining in hospital at end of year	3
Discharged	8
Died	1
Fatality rate	11·1 per cent.
Average day of disease on admission	13·7
Average stay in hospital—Discharges	69·25 days
„ „ „ Death	7 „
Average age of patients	27·3 years

Other diseases admitted as enteric fever :—

Meningococcal meningitis	1 case	Fatal
Septic broncho-pneumonia and chronic endocarditis	1 „	„
Hodgkin's disease	1 „	Recovered
Acute pleurisy	1 „	„
Simple laryngitis	1 „	„
Simple gastritis	1 „	„
Misplacement of uterus	1 „	„

The type of disease in cases discharged and died was as follows :—

Typhoid	6 cases
Paratyphoid	3 „

The complications were :—

Typhoid Fever, Otorrhœa	1 case
Paratyphoid Fever, Thrombosis and Hæmorrhage	1 case

In the fatal case the cause of death was :—
Perforation and General Peritonitis.

ERYSIPELAS.

One hundred and ninety-three cases were admitted, a decrease of 50 on the previous year, and 181 cases were discharged. There were 13 deaths, giving a mortality rate of 6·7 per cent., as against 9·75 per cent. in the previous year.

There were 26 cases notified as erysipelas in which the original diagnosis had to be amended. The following is a list of the conditions in which alteration of the notified diagnosis had to be made :—

	Cases
Dermatitis	3
Septic wound	1
Cellulitis	8
Acute eczema	1
Septic sore	1
Erythema	1
Cavernous sinus thrombosis	1
Malignant disease and cellulitis	1
Septicæmia	1
Septal abscess	1
Septic scald	1
Herpes (opthalmic division, fifth nerve)	1
Impetigo	1
Toxic rash	1
Furunculosis	1
Acute mastitis	1
Septic bursitis	1

MEASLES.

Two hundred cases were admitted and 156 were discharged. Six deaths occurred, giving a fatality rate of 3·7 per cent. Five of the 6 fatal cases were complicated by broncho-pneumonia and 10·5 per cent. of the total cases.

Measles Prophylaxis.

A few adult patients were admitted to hospital suffering from measles during the year 1931, and in each case where permission was given a small supply of convalescent blood serum was obtained about 7 to 10 days after the disappearance of the rash. About 1,000 c.cs. of convalescent serum was thus made available for prophylactic use in wards which became cross infected with measles.

Absolute prevention was obtained in every case by the intramuscular injection of contacts with 10 c.cs. of serum immediately after exposure.

As the quantity of serum available was limited, a few cases were given only 5 c.cs. of convalescent serum. This quantity in some cases proved to be insufficient for prevention, but produced an attenuated form of the disease, after prolongation of the usual incubation period. Catarrhal symptoms were very slight, there was little pyrexia or malaise, and the rash was of a very transient nature.

The value of measles propyhlaxis is limited by the scarcity of suitable donors.

COMPLICATIONS IN MEASLES.

Complication	Recovered	Died
Broncho-pneumonia	12	5
Otorrhœa	11	—
Bronchitis	5	—
Laryngitis	2	—
Lobar Pneumonia	2	—

PUERPERAL FEVER.

The number of admissions was 150, as against 191 in the previous year, showing a decrease of 41. One hundred and thirty-eight were dischaiged cured and 12 deaths occurred, giving a case mortality of 8 per cent., as against 14·05 per cent. during the previous year. One death occurred within 48 hours of admission.

The average stay in hospital of those who recovered was 34·2 days, and of fatal cases 14·2 days.

The average day of disease on admissior to hospital was the sixth.

OTHER INFECTIOUS DISEASES.

The following table gives the admissions of other infectious diseases during the year :—

	Cases
Encephalitis lethargica	11
Rubella	45
Whooping cough	32
Chickenpox	11
Epidemic cerebro-spinal fever	27
Mumps	4
Acute anterior poliomyelitis	1

Immune anti-poliomyelitis horse serum was used successfully in the case of poliomyelitis. The dose administered was 10 c.c. intrathecally and 15 c.c. intravenously.

CEREBRO-SPINAL FEVER.

Twenty-seven cases of meningococcal meningitis were treated during the year. Of these 21 died and 6 recovered, giving a fatality rate of 78 per cent.

Age Group	No. of Cases	Male	Female	Died	Recovered	Case Mortality per cent.
Under 1 year	7	3	4	7	0	100
1 to 5 years	9	4	5	7	2	78
5 ,, 10 ,, ...	4	2	2	1	3	25
10 ,, 20 ,, ...	3	1	2	2	1	67
20+ ,, ...	4	2	2	4	0	100

Average day of disease on admission to hospital :—

Recoveries : seventh.

Deaths : fourteenth.

Average day of disease on which death occurred : twenty-first ;

Average number of punctures performed (lumbar, cistern, or ventricular) : six.

Average amount of serum given : 60 c.cs.

	Cases	Deaths	Recoveries	Death Rate
Polyvalent serum employed ..	11	10	1	91 per cent.
Monovalent Group I. serum employed	15	11	4	73 per cent.

During the first part of the year cases were treated with polyvalent antimeningococcal serum such as had been in use for several years. The mortality was abnormally high (91 per cent.), and it was proved that no agglutination of an organism isolated from one fatal case was produced by the polyvalent serum.

The organism most frequently present was shown to belong to Type I., and, in the latter part of the year, monovalent Group I. serum prepared against recently isolated strains became available and was employed in treatment. Cases treated with this serum showed a lower death rate (73 per cent.). Two

of the cases treated with Group I. serum were admitted on the 60th and 68th day of disease respectively suffering from chronic post basal meningitis with hydrocephalus. Excluding these cases the death rate in patients treated with Group I. serum is reduced to 69 per cent.

TABLE OF CEREBRO-SPINAL FEVER CASES, 1927—1931.

	Discharges and Deaths	Percentage Death Rate
1927	4	50
1928	2	100
1929	4	75
1930	8	100
1931	27	78

BABIES' WARD (MALNUTRITION AND RICKETS).

The 8 cots of the Babies' Ward were fully occupied throughout the year. There were 13 admissions and 13 discharges.

TABLES FOR 1931.

TABLE SHOWING NUMBERS OF VARIOUS DISEASES TREATED.

DISEASE	Remaining in Hospital, Jan. 1st, 1931	Admitted	Discharges and Deaths	Remaining in Hospital, Dec. 31st, 1931
Scarlatina	368	2,513	2,652	229
Diphtheria	101	616	613	104
Enteric Fever	—	12	9	3
Erysipelas	15	193	194	14
Puerperal Fever	16	150	150	16
Measles	3	200	162	41
Other Diseases	29	556	555	30
Total	532	4,240	4,335	437

Other Diseases Admitted as Encephalitis Lethargica.

	Recovered	Died
Cerebral Hæmorrhage	1	1
Tuberculous Meningitis	—	2
? Glaucoma	1	—
N.A.D.	1	—

Post-mortem Examinations.

During the year 25 post-mortem examinations were performed.

Disease Notified	Post-Mortem Findings
Puerperal Fever	Acute Streptococcal Tonsilitis.
Puerperal Fever	Streptococcal Empyema. Pyæmia.
Puerperal Fever	Septicæmia. Thrombo-phlebitis Iliac Vessels.
Puerperal Fever	Septicæmia.
Puerperal Pyrexia	General Peritonitis.
Scarlet Fever	Broncho-pneumonia. Septic Meningitis.
Scarlet Fever	Double mastoiditis. Septicæmia.
Scarlet Fever	Double mastoiditis. Broncho-pneumonia.
Scarlet Fever	General Miliary Tuberculosis.
Scarlet Fever	Pneumococcal Peritonitis.
Diphtheria	Laryngeal Diphtheria.
Diphtheria (two cases)	Influenzal Pneumonia.
Diphtheria	Mitral Stenosis.
Cerebro-Spinal Fever (three cases)	Meningococcal Meningitis.
Cerebro-Spinal Fever	Tuberculous Meningitis.
Typhoid Fever	Perforation. General peritonitis.
Typhoid Fever	Septic Broncho-pneumonia. Endocarditis.
Typhoid Fever	Basal Meningitis.
Encephalitis Lethargica	Tuberculous Meningitis.
Encephalitis Lethargica	Acute Nephritis. Cerebral Hæmorrhage.
Erysipelas	Cavernous Sinus Thrombosis.
Measles	Acute Miliary Tuberculosis.

Report of Cases Treated in the Bed Isolation Ward.

Nature of Cases	No. of Cases
Scarlet Fever—Diagnosis not upheld	95
„ „ Diagnosis up held :—	
Observation Cases	17
Scarlet Fever and Diphtheria	33
„ „ and Simple Vaginitis	6
„ „ and Rhinorrhœa	38
„ „ and Otorrhœa	10
„ „ and Impetigo	5
„ „ and Ringworm	2
„ „ and Scabies	3
„ „ and Burns	2
„ „ and Whooping Cough	9
„ „ and Laryngitis	1
„ „ and Phthisis	2
„ „ and Chickenpox	5
„ „ and Mumps	1
„ „ and Surgical Conditions	5
„ „ and Dysentery	7
„ „ and Measles	1
„ „ and Erysipelas	1
„ „ and Retropharyngeal Abscess	2
Septic Scarlet Fever	5
Scarlet Fever for isolation prior to discharge	8
Diphtheria—Diagnosis not upheld :—	
Quinsy	1
Retropharyngeal Abscess	3
Vincent's Angina	5
Measles	1
Tonsilitis	7
Bronchitis and Broncho-pneumonia	5
Scarlet Fever	11
Observation Cases	17
Diphtheria—Diagnosis upheld :—	
Diphtheria and Whooping Cough	3
„ and Erysipelas	1
„ and Chickenpox	1
„ and Observation for Rash or Desquamation	9
„ and Enteritis	1
Carried forward	323

CASES TREATED IN THE BED ISOLATION WARD—continued.

Brought forward	323
Measles	22
Measles and Other Infectious Conditions	7
Measles not upheld	7
Chickenpox	4
Rubella	7
Rickets	2
Enteritis	2
Tonsilitis	6
Bronchitis and Broncho-pneumonia	11
Cerebro-spinal Fever	2
Mumps	1
Poliomyelitis	1
Encephalitis Lethargica	1
	396

Only one case of cross infection occurred, a patient who developed scarlet fever.

LABORATORY REPORT.

MICROSCOPICAL EXAMINATION OF CULTURES FOR B. DIPHTHERIA.

Source of Swab	Positive	Number Examined
Throat	462	7,460
Nose	380	6,040
Ears	104	1,346
	946	14,846

A list is appended of the various specimens examined in the laboratory during the year.

Fæces	173
Urine	112
Cerebro-spinal fluid	96
Sputa	59
Pleural effusions	12
Blood cultures	27
Peritoneal fluid	1
Pus	14
Hair (for ringworm)	1
Smears—	
Vaginal	88
Throat	69
Uterine	2
Conjunctival	2
Blood agglutinations	35
Autogenous vaccines prepared	8
Differential blood count	1

Illness of Nursing Staff Necessitating Ward Treatment during 1931.

Condition	Number of Cases	Days Warded
Diphtheria	3	98
Virulent Diphtheria Carrier (Schick-ve)	1	30
Scarlet Fever	3	88
Rubella	3	18
Measles	1	17
Flexner Dysentery	1	14
Tonsilitis and Quinsy	36	306
Otitis Media	1	13
Naso-pharyngeal Catarrh and Common Cold	3	12
Cervical Adenitis	3	31
Bronchitis	2	13
Rheumatism	8	77
Erythema Nodosum	1	12
Furunculosis	1	5
Dermatitis	1	18
Diarrhœa	2	14
Abdominal Pain	1	5
Reaction to Vaccination	1	6
Cellulitis	1	7
Tonsillectomy	2	13
Total	75	797

Immunization of Nursing Staff.

During the year 1931, 93 nurses joined the hospital staff. All of these were tested for susceptibility to diphtheria and scarlet fever by the Schick and Dick tests. Thirty-three per cent. were positive Schick reactors and 26 per cent. positive to the Dick test.

Six nurses who were susceptible both to diphtheria and scarlet fever were given a combined diphtheria and scarlet fever prophylactic course.

Eighteen Schick positives were immunized against diphtheria and 9 Dick positives were immunized against scarlet fever.

A number of nurses were immunized with toxoid antitoxin floccules instead of toxoid antitoxin mixture. The advantages claimed for this new immunizing mixture are three :—

1. That immunity is more quickly produced.
2. That only two injections are required instead of three injections of T.A.M.
3. That reactions are less common.

One case was rendered Shick negative by 1 dose ; 14 were negative when retested one month after the second dose ; and 4 two months after the second dose. Only 1 case required three injections. Reactions occurred in 13 per cent. of cases, only one being severe. We have thus satisfied ourselves that immunity to diphtheria can be more quickly produced by two doses of this new immunizing mixture than by three doses of the toxoid antitoxin mixture.

In connection with scarlet fever immunization, one nurse apparently was insusceptible to scarlet fever prophylaxis. She had five prophylactic injections altogether, each of which was followed by a severe reaction. The total number of skin test doses given was 18,500. She was Dick tested on no fewer than six occasions, and still remained strongly positive. In view of the severe reaction which followed every inoculation attempts at immunization were not persisted in.

Thirty-seven nurses were inoculated against typhoid and paratyphoid fevers. Reactions were noted in 17 per cent.

Thirty members of the domestic staff were tested for susceptibility to diphtheria and scarlet fever. 40 per cent. were Schick positive and 7 per cent. Dick positive. No active immunization was done.

PUERPERAL FEVER.

On the 1st January, 1931, there were 16 patients in the Puerperal Fever Ward, and during the year 150 patients were admitted. Of these, 16 were still in the ward at the end of the year. This report is, therefore, based on 150 patients discharged from the ward during the year. Eleven of these patients, notified as puerperal pyrexia, were not suffering from infection of the genital tract or from any disease attributable to pregnancy or the puerperium. There remain, therefore, 139 patients to consider whose morbidity was directly attributable to pregnancy. This figure includes 65 cases of septic abortion and 74 cases of sepsis following full term delivery.

Twelve deaths occurred during the year. Two of these were early abortions admitted on account of general peritonitis due to perforation of the uterus. One patient died of an acute streptococcal tonsilitis contracted during convalescence. The remainder of the deaths followed full term delivery.

The following Table illustrates the relative importance of sepsis following full term delivery, as compared with that following an abortion :—

	Total Cases	Deaths	Case Mortality
Full term	74	9	12·2 per cent.
Abortions	65	2	3·1 „

It should be noted that two deaths following abortion occurred in cases in which there had been instrumental interference, and the patients were moribund on admission.

The causes of death in the 9 cases following full term delivery illustrate the grave dangers of septicæmia and general peritonitis—6 deaths being due to septicæmia and 3 to general peritonitis.

Puerperal Sepsis—74 Cases.

Complications.

Complications were present in 37 cases.

	Cases	Mortality Rate
Septicæmia	12	50 per cent.
Parametritis	11	Nil
Phlegmasia alba dolens	5	Nil
Pelvic Abscess	3	Nil
General peritonitis	3	100 per cent.
Mammary abscess	2	Nil
Insanity	1	Nil

Septicæmia.

Of the 12 cases of septicæmia, 9 were due to the hæmolytic streptococcus, 5 of which died.

Two cases were caused by an anærobic streptococcus, one of which recovered.

The final case was due to infection with non-hæmolytic streptococci and B. coli, and this patient recovered.

All these patients were treated with Metarsenobillon according to the plan devised by Dr. Leonard Colebrook, combined with local treatment to the infected uterus.

There has been no radical alteration in the treatment of cases.

On admission a bacteriological examination of the flora of the uterus and vagina is carried out, together with a blood examination.

Glycerine combined with a mild antiseptic is injected into the uterus.

Cases of septicæmia are treated with Metarsenobillon intramuscularly.

The average stay in hospital of the cases which recovered was 34·2 days, which is the lowest figure on record.

The average stay in hospital of the cases which died was 14·2 days.

The average day of disease on admission was the sixth, which continues to be high, and is responsible for the long convalescence and certainly for the number of complications.

The following table illustrates the incidence of puerperal sepsis in multiparæ and primiparæ, following normal uncomplicated labour and following difficult labour in which interference was called for.

	Cases	Normal Labour	Difficult Labour
Primiparæ	42	20	22
Multiparæ	32	20	12
	74	40	34

Conclusions.

There have been no complications to record from septic abortion except in one case which developed parametritis and subsequently peritonitis, but which eventually recovered. The majority of the abortion cases gave a history signifying about three months' pregnancy.

Pyrexia following abortion is notifiable, as it is when it follows full term delivery. The death rate is based on the total number of notifiable cases, but in the report submitted it has been noted that when septic abortion is included the death rate from "puerperal fever" may be considerably less.

It has further been noted that a more complete recovery can be ensured when, following upon early notification and removal to hospital, the patient receives the specific treatment described above at an early stage of the illness.

ABERGELE SANATORIUM.

During 1931 the new sanatorium for children was completed. The new buildings were opened on the 23rd June, 1931, by the Lord Mayor of Manchester (Alderman G. F. Titt), and since that date the work has been extended as will be seen from this report.

The work of the past year has been concerned largely with equipment and the organisation of hospital detail and procedure.

The number of available beds was as follows :—

	Adults	Children
1st January to 15th June, 1931 ..	52 ..	10
16th June to 31st December, 1931 ..	52 ..	210 (including 10 beds in Isolation Ward)

The available beds are allocated according to the age of the patient and the type of disease, as follows :—

Age		Number	Beds
1–4	Bone and Joint Tuberculosis.. ..	10 Boys 10 Girls	20
4–15	Ditto ditto	37 Boys 37 Girls	74
1–4	Pulmonary Tuberculosis, including tracheo-bronchial glands, peripheral glands, abdominal, etc.	10 Boys 10 Girls	20
4–15	Ditto ditto	37 Boys 37 Girls	74
—	Admission Ward	—	12
—	Isolation Ward	—	10
Adults (Plas Uchaf)	Pulmonary Tuberculosis	42 Males 10 Females	52
		Total ..	262

At the commencement of the year there were 56 patients in the sanatorium :—

46 in the Adult Section and
10 in the Pen-y-Coed Bungalow.

The first patients, 20 in number, were admitted to the new Sanatorium during the week commencing the 15th June, 1931, and in addition the 10 children were transferred from the Pen-y-Coed Bungalow. The subsequent rate of admission has been controlled by the necessary segregation of all children in the Admission Ward for a period of 23 days before transference to the main Sanatorium wards.

TABLE I.

GENERAL CLASSIFICATION OF CASES TREATED IN 1931.

Classification on Admission	Patients in Residence on 1st Jan., 1931		Admitted		Discharged		Died		Patients in Residence on 31st Dec., 1931	
Pulmonary Group—	Adults	Children	Adults	Children	Adults	Children	Adults	Children	Adults	Children
T.B. Minus	17	Nil	43	36	47	2	Nil	Nil	13	34
T.B. Plus Gr. 1	19	Nil	18	1	33	Nil	Nil	Nil	4	1
T.B. Plus Gr. 2	10	Nil	56	8	32	Nil	Nil	Nil	34	8
T.B. Plus Gr. 3	Nil	Nil	1	Nil	1	Nil	Nil	Nil	Nil	Nil
Non-Pulmonary Group—										
Bones and Joints	Nil	10	Nil	38	Nil	1	Nil	Nil	Nil	47
Abdomen	Nil	Nil	Nil	7	Nil	Nil	Nil	Nil	Nil	7
Other Organs	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	1
Peripheral Glands..	Nil	Nil	Nil	6	Nil	Nil	Nil	Nil	Nil	6
Total	46	10	118	97	113	3	Nil	Nil	51	104

TOTAL PATIENTS TREATED—

Adult Section of the Sanatorium	164
Children's Section of the Sanatorium	107

The number of children admitted under the classification "T.B. Minus" was 36 or 80 per cent. of the total admissions of children suffering from pulmonary tuberculosis.

Amplification of this classification is desirable, since it is not a common feature of the pathogenesis of the disease to find the "Adult" clinical form of pulmonary tuberculosis in children.

The primary or initial lung focus in childhood in many instances is characterised by the development of a limited area of inflammation with an analogous and concurrent infection of the glands situated at the root of the lungs. The primary lesion may heal without gross destruction of the pulmonary tissue and a residual area of calcification in the lung tissue with a variable degree of involvement of the root glands may be the only evidence of the existence of a tuberculous pulmonary process. The type and extent of the lung foci and the degree of involvement of the root glands are in each patient dissimilar. It is a particular episode in the infection of the child by the tubercle bacillus and the symptoms are frequently more pronounced than the actual pathological changes in the lungs would lead one to expect. In favourable circumstances the disease may be arrested at this stage, but in adverse circumstances further intra-pulmonary spread may occur with the ultimate development of the "Adult" clinical form of pulmonary tuberculosis.

Included, therefore, in the classification "T.B. Minus" are cases ranging from a minimal infection of the root glands with a clinically indeterminable pulmonary lesion to cases with evidence of invasion and destruction of the lung tissues, but with the absence of tubercle bacilli from the sputum.

An additional classification dependent on clinical, tuberculin, and radiological findings of the "T.B. Minus" cases is therefore made as follows:—

Primary lung focus in association with involvement of the tracheo-bronchial (root) glands	3 ..	*(8·4%)*
Tracheo-bronchial (root) glands	20 ..	*(55·5%)*
Tracheo-bronchial glands with evidence of intra-pulmonary spread	13 ..	*(36·1%)*

The figures in italics show the percentage in each group of the total "T.B. Minus" cases.

Table 2 shows the previous location of children admitted during the year.

TABLE 2.

Manchester Hospitals	38
Min-y-don	12
Own Homes	47
	97

TABLE 3.

Analysis of Admissions of Bones and Joints.

	Hip Joint	Knee Joint	Ankle Joint	Spine
Advanced	12	7	Nil	13
Intermediate	1	2	Nil	2
Early	Nil	1	Nil	Nil

TABLE 4.

RESULTS OF TREATMENT IN DISCHARGED CASES.

Classification on Admission to the Sanatorium	Condition at Time of Discharge	Duration of Residential Treatment														Total
		Under 3 months				3–6 months				6–12 months				Over 12 months				
		Adults		Children		Adults		Children		Adults		Children		Adults		Children		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Pulmonary—																		
T.B. Minus	Quiescent ..	2	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	5
	Improved ..	11	..	..	..	13	3	1	1	8	3	..	..	1	..	..	..	41
	Stationary ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
	Worse	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
T.B. Plus Gr. 1	Quiescent ..	1	..	..	..	..	1	..	..	2	1	..	..	..	..	..	..	5
	Improved ..	6	2	..	..	11	..	..	..	4	..	..	..	1	..	..	..	24
	Stationary ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Worse	..	..	..	..	2	..	..	..	..	..	..	..	2	..	..	..	4
T.B. Plus Gr. 2	Quiescent ..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2
	Improved ..	9	1	..	..	7	..	..	..	3	1	..	..	..	1	..	..	22
	Stationary ..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
	Worse	1	1	..	..	..	1	..	..	2	..	..	..	..	..	..	..	5
T.B. Plus Gr. 3	Quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Improved ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Stationary ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Worse	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Non-Pulmonary—																		
Bones and Joints	Quiescent ..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
	Improved ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Stationary ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Worse	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
												TOTAL		..	..	..	..	116

The results of treatment in these 116 discharged cases (expressed per cent.) are :—

Quiescent	11·2%
Improved	75%
Stationary	3·4%
Worse	10·4%

Treatment.

Tuberculosis is a general disease, but major manifestations may be present in the lungs, in the bones and joints, or in some other organ. In each patient the first principle of treatment is the establishment of the sanatorium régime, but methods of specific treatment vary according to the area of the body predominantly diseased.

Pulmonary Tuberculosis (Adults).

On admission each patient is placed at complete rest in bed. A careful pulmonary and general examination is made and a pulmonary radiogram is taken. According to the degree of activity of the disease the duration of the complete resting period is assessed. Thereafter the patient is carefully advanced through walks of graded length to the stage of regulated work in the grounds or in the kitchen garden. This routine, with suitable dietary, is effectual in the majority of the patients who are not of a type requiring active treatment for the arrest of advancing disease. In the case of patients who do not respond to the routine outlined certain supplementary forms of medical and surgical treatment become essential. During the year sanocrysin has been administered in six instances and an artificial pneumothorax induced in four cases. No major surgical operation for the permanent collapse of the lung was necessary, but a phrenic evulsion was performed on two patients.

Pulmonary Tuberculosis (Children).

The treatment of children suffering from the "adult" clinical form of pulmonary disease is the same in respect of general procedure as in the similar manifestations of the disease in adults. Sanocrysin has been administered in four cases and an artificial pneumothorax induced in one case with satisfactory results. In the active stages rest is again of supreme importance. After the preliminary period of complete rest the child receives instruction in bed, but when the local and general condition become sufficiently improved is able to attend the schoolroom. In addition to the ordinary school curriculum facilities are provided for work in the school garden, nature walks in the grounds, and specialised instruction in the manual room.

Bone and Joint Tuberculosis (Children).

The treatment of bone and joint tuberculosis is essentially non-operative. The attainment of complete rest for the diseased tissues and the maintenance of a position of the bones of the diseased joint which will finally give the best functional results are of supreme importance. To ensure this result treatment is carried out by fixation of the affected part in plaster of Paris splints or on special frames. The period of fixation depends upon the extent and stage of the disease. The construction of all splints is being undertaken in the sanatorium.

Operative treatment should only be necessary to repair an ultimate deformity or to stabilise a joint which after destruction by a tuberculous process is inherently weak. The work of the sanatorium is in too early a stage to report on any restorative work on deformed joints.

Heliotherapy.

The beneficial effects to be observed from regulated solar irradiation in the treatment of tuberculosis, particularly the extra-pulmonary forms, has been established.

Treatment of suitable patients, and this includes the majority of the children, has been carried out in a systematic manner. The situation of the sanatorium and the extension to the verandah allow every facility for direct sun exposure.

After admission the patient is gradually accustomed to life in the open-air, first in the admission ward for a period of twenty-three days and then in the sanatorium wards for a period of fourteen days. No sun treatment is given during this time, but records are made of the temperature course and of the general condition of the patient. The sun baths are applied gradually, beginning with the feet and increasing the time of exposure and part exposed daily until the whole body is exposed. A maximum of four hours of irradiation is allowed daily. This period is varied when necessary according to the individual peculiarities of the patient.

Occupational Therapy.

Adequate occupation of the adult patients at Plas Uchaf is of the greatest importance. The work apart from the specific effect which it has on the site of disease has an excellent moral effect. The development of the occupational work is under consideration and it has been suggested that the old laundry building should be converted into workshops for the regular employment of patients under the supervision of a competent and interested instructor. This proposal has this year (1932) been approved in principle by the House Committee and will come up for consideration when the estimates are being framed for the next financial year.

Table 5 shows the number of plaster of Paris and celluloid splints constructed during the year.

TABLE 5.

Double Spica	Single Spica	Extensions and Knee Plasters	Plaster Beds	Celluloid Jackets	Celluloid Headpiece	Celluloid Spica
4	8	11	3	2	1	2

Serial radiograms are an invaluable guide to treatment especially in disease of the bones and joints. They provide accurate information of the degree of destruction of the affected joint and give precise information regarding the process of healing and the treatment to be adopted.

TABLE 6.

Radiograms Taken during the Year.

Lungs	139
Spines	43
Hips	23
Knees	20
Other Bones and Joints	11
Abdominal	5
Total	241

During the year one operation for acute appendicitis was performed.

INFECTIOUS ILLNESSES.

During the year three children were transferred from the sanatorium wards to the isolation ward suffering respectively from diphtheria, scarlet fever, and chickenpox. The source of infection in each instance was obscure.

Staff.

The numbers of staff at the children's sanatorium on the 31st December, 1931, were as follows:—

Sisters	7
Staff nurses	7
Probationer nurses	20
Domestic staff	32

The present scarcity in the country of suitable candidates has unfortunately coincided with the opening of the sanatorium. The burden of work arising from this has largely fallen on the matron (Miss Knowles), who has consequently been faced with considerable difficulty in the organisation of the duties of the staff.

Lectures for the probationer nurses have been in operation throughout the winter. A complete course of instruction consisting of lectures and demonstrations in the wards is given by members of the staff. It is hoped that difficulties at present experienced in obtaining suitable candidates for senior posts will be reduced when those of our probationer nurses who exhibit a higher degree of ability are able to take up senior posts.

Recreation and social facilities for the nursing staff concern all hospitals, but when a hospital is isolated the importance of adequate recreation becomes increasingly urgent. The members of the nursing staff have already taken in hand the organisation of their own social club and the formation of a tennis club represents a very healthy beginning.

School.

The appointment of the school staff was under consideration during the latter part of the year. The school has been fully equipped and there are two classrooms which provide accommodation for 50 children, together with a special manual room in which sixteen children can be taught. Classes will be held in the classrooms and bed-patients will be taught in the wards, thus ensuring that all children of school age will receive instruction.

Social Work.

During the year a scout troop was formed under the supervision of Dr. Murray and a girl guide company under the supervision of Miss M. C. T. Evans, the head teacher.

General Notes.

The house formerly occupied by the Medical Superintendent has been reconstructed and divided into two houses, one of which is at present occupied by the assistant teacher.

The laundry at Plas Uchaf has been closed and all work is now undertaken at the new laundry, to which the Plas Uchaf staff were transferred.

The courtyard at Plas Uchaf has been improved by being relaid with tarred chips and new paths have been made round the chalets. Further work on the various paths, is, however, necessary.

Work was commenced on the reconstruction of the adult female patients' dayroom.

The storage batteries at Plas Uchaf were worn out to such a degree as to require entire replacement or transference from the existing system to a general electric supply. Instructions were given that the latter proposal should be adopted. Arrangements are now in hand for the installation of an electric supply from the North Wales Power Co. Ltd.

Gardens.

In children for whom an increase in resistance to the insidious infection of tuberculosis is vital, the abundant use of fresh fruit and vegetables is essential to a much higher degree than in the normal child.

To ensure an adequate supply of vegetables and plants an addition to the kitchen garden had to be made. During the spring eight acres of ground were added to the existing three acres and the extended garden is now under cultivation. Two greenhouses and a potting shed form part of the addition, and towards the end of the year preparations for the planting of an orchard were in progress.

In addition to the provision of vegetables for the sanatorium the propagation and cultivation of bedding plants, etc., for decorative purposes in the grounds and in the wards forms an important section of the garden work.

Afforestation.

The afforestation of the estate has been further developed and 22,775 pines have been planted at Pen-y-Craig and at Pen-y-rallt. Since planting commenced in 1917 the following plantations have been laid out :—

Plantation	Date Planted
Plas Uchaf	1916-1917
Lily pond	1918
Tower Hill north face	1919-1920
Brynian	1921
Pen-y-rallt	1922-1923
Top of Tower Hill	1924-1925
Play house	1926
Tower Hill fields	1929
Reservoir field	1930
Pen-y-rallt and Pen-y-craig	1931

The total number of trees planted up to March 31st, 1932, is 370,375. At present there are in the nurseries 37,000 seedling pines.

Considerable work has been done in the repair of the estate paths and suitable seats have been constructed for the use of the patients.

Farm.

During the year progress has been made with the establishment of the dairy herd of Ayrshire cows and at the end of the year the stock of milking cows was 26. Routine veterinary examination of the stock and byres has done much to establish the efficiency of the herd and during the year we have received milk excellent in quality and cleanliness.

The amount of milk transferred to the sanatorium was :—

Plas Uchaf	5,421 gallons.
New Sanatorium	4,782 gallons.

The development of the dairy herd is the primary concern of the farming operations. The former use of pasture lands for the grazing of bullocks will be discontinued or reduced to an absolute minimum, and the number of pigs kept will be determined by the quantity of swill available from the hospital.

BAGULEY SANATORIUM.

By Dr. H. G. Trayer, Medical Superintendent.

The number of available beds was 333.

The number of patients admitted was 533, the daily average number of beds occupied being 325·53.

The following table gives the number of admissions, discharges, etc., for the year 1931 compared with the previous four years :—

	1927	1928	1929	1930	1931
Number of patients :—					
In hospital, 1st January	316	315	316	329	300
Admitted during the year ..	642	675	713	599	533
Discharged during the year ..	473	506	469	442	377
Died during the year	170	168	231	186	147
Total treated during the year ..	958	990	1,029	928	833
Remaining in hospital, 31st Dec.	315	316	329	300	309
Daily average number of beds occupied	326·14	326·93	326·42	325·6	325·53
Average length of stay of patients discharged :					
Males .. .. (days)	145·85	172·02	158·93	188·01	174·4
Females .. .. .. ,,	163·12	164·75	188·15	208·1	214·74
Average length of time in hospital of fatal cases :					
Males .. .. (days)	192·52	156·61	212·51	159·4	144·12
Females .. .. .. ,,	165·84	207·58	203·04	206·36	263·25
Case mortality	17·74	16·97	22·41	20·04	17·64

The foregoing summary shows that although the total number of patients treated for the year is almost 150 less than the average for the previous four years, yet the daily average of beds occupied is almost the same, this being mainly accounted for by the fact that the duration of stay of fatal cases among females was considerably longer.

Cases admitted from the districts of the Bucklow Joint Hospital Board are included in all totals given in this Report. The details of such cases are :—

On 1st January, 1931, there were 2 patients in the Sanatorium ; 8 patients were admitted during the period, 1 patient was discharged, and 4 died ; 5 patients remained in the hospital on 31st December.

Pathological Laboratory Report.

Number of specimens of sputum examined	2,828
Number of specimens found to be positive	1,629
Number of specimens found to be negative	1,199

Other examinations :—

Special examination of urine	1
Pleural effusion	1
Pus	1
Cerebro-spinal fluid	1

(In the examinations tubercle bacilli were found in the following :—Urine 1, cerebro-spinal fluid 1.)

It is hoped to introduce in the new year a modification by Andrus and MacMahon of Pottenger's method for examining consistently negative sputum cases.

The number of Wassermann's reactions carried out by the Public Health Laboratory was about the same as in previous years. In addition, special investigations were conducted on a number of cerebro-spinal fluids, and a series of guinea-pigs were inoculated in an endeavour to confirm diagnosis ; 3 pleural effusions in these series were negative and 2 positive.

X-Ray Report.

Number of patients screened	996
Number of skiagrams taken	360

Dental Report.

Patients seen	361
Fillings	6
Extractions	377
Dentures	5
Repairs and adjustments to dentures	12

In addition, the dentist has paid numerous visits to the wards for the purpose of examining the mouths of bed-patients.

RETURN SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF PATIENTS SUFFERING FROM PULMONARY TUBERCULOSIS AND OF OBSERVATION OF DOUBTFUL CASES DISCHARGED DURING THE YEAR.

Classification on Admission	Age at Discharge	Condition on Discharge	Duration of Stay: Under 3 months M.	Under 3 months F.	3—6 months M.	3—6 months F.	6—12 months M.	6—12 months F.	More than 12 months M.	More than 12 months F.	Total
CLASS T.B. MINUS	Ages 15—24	Quiescent ..	..	..	..	..	..	..	..	..	..
		Improved ..	3	2	3	..	1	..	1	..	10
		Stationary ..	..	1	..	1	..	2	..	..	4
		Worse	..	..	..	..	..	..	..	..	..
		Died	1	..	..	..	..	..	..	..	1
	Ages 25—34	Quiescent ..	1	..	..	..	..	..	..	..	1
		Improved ..	2	1	3	2	..	1	..	..	9
		Stationary ..	2	1	..	..	..	1	..	..	4
		Worse	..	..	..	..	..	..	..	..	..
		Died	2	..	..	..	..	..	..	..	2
	Ages 35—44	Quiescent ..	..	..	..	..	..	..	..	..	..
		Improved ..	3	..	..	..	2	1	..	..	6
		Stationary ..	..	2	..	..	1	..	..	..	3
		Worse	..	..	..	..	..	..	..	..	..
		Died	..	..	..	..	..	..	..	..	..
	Ages 45—54	Quiescent ..	1	..	1	..	..	..	1	..	3
		Improved ..	2	2	5	..	..	..	..	..	9
		Stationary ..	1	..	2	..	1	..	..	..	4
		Worse	..	..	..	..	..	..	..	..	..
		Died	1	..	..	..	..	..	..	..	1
	Ages 55—64	Quiescent ..	..	..	..	..	..	..	..	..	..
		Improved ..	1	..	..	1	1	..	..	..	3
		Stationary ..	..	..	..	..	..	1	..	..	1
		Worse	..	..	..	..	..	..	..	..	..
		Died	1	..	..	..	..	..	..	..	1
	Ages 65 and over	Quiescent ..	..	..	..	..	..	..	..	..	..
		Improved ..	..	..	..	..	..	..	..	..	..
		Stationary ..	..	..	..	..	..	..	..	..	..
		Worse	..	..	..	..	..	..	..	..	..
		Died	..	..	..	..	..	..	..	..	..

The diagnosis in the five deaths recorded under T.B. Minus Group, verified in three cases by autopsy, is as follows :—

Age	Sex	Remarks
58	M.	Clinical findings : pulmonary tuberculosis. Autopsy refused.
32	M.	Findings at autopsy : pulmonary tuberculosis.
16	M.	Findings at autopsy : tuberculous meningitis, tuberculous mediastinal lymph glands, pulmonary tuberculosis.
27	M.	Clinical findings : pulmonary tuberculosis. Autopsy refused.
49	M.	Findings at autopsy : œdema of lungs, chronic bronchitis, pulmonary tuberculosis.

Classification on Admission	Age at Discharge	Condition on Discharge	Duration of Stay								Total	Positive Sputum on Admission Negative on Discharge
			Under 3 months		3—6 months		6—12 months		More than 12 months			
			M.	F.	M.	F.	M.	F.	M.	F.		
Class T.B. Plus, Group I.	Ages 15—24	Quiescent ..	..	..	..	..	..	..	..	..	..	1
		Improved ..	..	..	..	..	1	..	..	1	2	
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 25—34	Quiescent ..	2	..	..	1	..	..	..	..	3	2
		Improved ..	1	..	..	..	..	..	..	..	1	
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 35—44	Quiescent ..	..	..	..	..	..	..	..	..	..	3
		Improved ..	2	..	..	..	..	..	..	..	2	
		Stationary ..	1	..	..	..	..	..	...	..	1	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 45—54	Quiescent ..	..	..	..	..	..	..	..	..	..	—
		Improved ..	..	..	..	..	..	..	..	..	..	
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	...	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 55—64	Quiescent ..	..	..	..	..	..	..	..	..	..	—
		Improved ..	..	..	..	..	..	..	..	..	..	
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 65 and over	Quiescent ..	..	..	..	..	..	..	..	..	..	—
		Improved ..	..	..	..	..	..	..	..	..	..	
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	

sification dmission	Age at Discharge	Condition on Discharge	Duration of Stay								Total	Positive Sputum on Admission—Negative on Discharge
			Under 3 months		3—6 months		6—12 months		More than 12 months			
			M.	F.	M.	F.	M.	F.	M.	F.		
	Ages 15—24	Quiescent ..	..	..	..	..	1	..	..	..	1	16
		Improved ..	9	5	5	3	5	4	5	5	41	
		Stationary ..	2	5	..	3	..	2	..	1	13	
		Worse	2	1	1	1	..	1	1	..	7	
		Died	..	1	..	1	1	1	1	1	6	
	Ages 25—34	Quiescent ..	..	..	..	..	..	..	..	..	..	9
		Improved ..	6	2	9	5	5	1	1	3	32	
		Stationary ..	4	1	6	..	2	3	1	..	17	
		Worse	..	..	..	1	..	2	..	..	3	
		Died	2	..	..	1	1	1	..	2	7	
ss T.B 'LUS, OUP II.	Ages 35—44	Quiescent ..	..	..	..	..	..	..	..	..	..	12
		Improved ..	5	2	14	..	8	1	4	1	35	
		Stationary ..	1	3	..	..	..	..	1	..	5	
		Worse	1	..	..	..	1	..	..	1	3	
		Died	..	..	1	..	..	1	1	..	3	
	Ages 45—54	Quiescent ..	..	..	..	..	..	..	..	..	..	12
		Improved ..	5	1	15	..	8	1	1	1	32	
		Stationary ..	1	..	2	..	2	..	..	..	5	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	3	1	3	..	1	..	8	
	Ages 55—64	Quiescent ..	..	..	..	..	..	..	..	..	..	3
		Improved ..	3	..	4	..	2	..	2	..	11	
		Stationary ..	..	1	..	..	..	..	..	1	2	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	1	..	..	..	1	..	2	
	Ages 65 and over	Quiescent ..	..	..	..	..	..	..	..	..	..	—
		Improved ..	..	..	1	..	..	..	..	..	1	
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	1	..	..	..	1	

Classification on Admission	Age at Discharge	Condition on Discharge	Duration of Stay								Total	Positive Sputum Admission-Negative Discharg
			Under 3 months		3—6 months		6—12 months		More than 12 months			
			M.	F.	M.	F.	M.	F.	M.	F.		
	Ages 15—24	Quiescent ..	..	..	..	..	..	..	..	..	..	
		Improved ..	1	..	..	..	..	1	3	2	7	
		Stationary ..	..	3	1	..	..	..	1	1	6	1
		Worse	2	2	..	3	..	..	..	2	9	
		Died	6	6	..	2	3	2	2	3	24	
	Ages 25—34	Quiescent ..	..	..	..	..	..	..	..	..	..	
		Improved ..	..	..	..	3	..	..	..	..	3	
		Stationary ..	4	1	..	..	..	1	..	..	6	1
		Worse	3	2	..	..	2	2	..	..	9	
		Died	13	9	3	1	1	8	..	3	38	
Class T.B. Plus, Group III.	Ages 35—44	Quiescent ..	..	..	..	..	..	..	..	..	..	
		Improved ..	..	..	..	..	2	1	..	..	3	
		Stationary ..	1	2	2	1	..	..	..	..	6	1
		Worse	..	1	2	..	..	..	..	..	3	
		Died	11	3	2	1	2	3	1	..	23	
	Ages 45—54	Quiescent ..	..	..	..	..	..	..	..	..	..	
		Improved ..	..	..	..	..	..	..	2	1	3	
		Stationary ..	4	..	1	..	..	..	..	1	6	1
		Worse	1	..	..	..	..	..	..	..	1	
		Died	10	1	..	..	4	..	1	1	17	
	Ages 55—64	Quiescent ..	..	..	..	..	..	..	..	..	..	
		Improved ..	..	1	..	..	..	..	1	1	3	
		Stationary ..	2	..	1	..	..	..	1	..	4	1
		Worse	1	..	..	..	..	..	..	1	2	
		Died	3	..	..	1	..	..	..	..	4	
	Ages 65 and over	Quiescent ..	..	..	..	..	..	..	..	..	..	
		Improved ..	1	..	..	..	..	..	..	..	1	
		Stationary ..	..	..	..	..	..	..	..	..	..	..
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	1	..	1	..	..	..	2	

Summary of Tables.

Classification	Condition on Discharge				
	Quiescent	Improved	Stationary	Worse	Died
Class T.B. Minus	4	37	16	..	5
T.B. Plus, Group I. ..	3	5	1	..	..
T.B. Plus, Group II. ..	1	152	42	13	27
T.B. Plus, Group III...	..	20	28	24	108
Total	8	214	87	37	140

Observation Cases.

Age at Discharge	Condition on Discharge	Duration of Stay								Total
		Under 3 months		3—6 months		6—12 months		More than 12 months		
		M.	F.	M.	F.	M.	F.	M.	F.	
Ages 15—24	Improved ..	3	3	1	..	..	..	1	..	8
	Stationary ..	..	..	..	..	..	..	..	..	..
	Worse	..	..	..	..	..	..	..	..	..
	Died	..	..	..	..	..	..	..	..	..
Ages 25—34	Improved ..	2	1	1	..	..	..	..	..	4
	Stationary ..	..	..	..	..	..	1	..	..	1
	Worse	1	..	..	..	..	..	..	..	1
	Died	..	1	..	1	..	..	..	..	2
Ages 35—44	Improved ..	10	..	1	..	..	..	..	1	12
	Stationary ..	1	..	..	..	..	..	..	..	1
	Worse	..	1	..	..	..	..	..	..	1
	Died	1	2	..	..	..	..	..	..	3
Ages 45—54	Improved ..	3	3	..	..	..	..	..	..	6
	Stationary ..	1	..	..	..	..	..	..	..	1
	Worse	..	..	..	..	..	..	..	..	..
	Died	..	1	1	..	..	..	..	..	2
Ages 55—64	Improved ..	1	..	..	..	..	..	..	..	1
	Stationary ..	1	..	..	..	..	..	..	..	1
	Worse	..	..	..	..	..	..	..	..	..
	Died	1	..	..	..	..	..	..	..	1
Ages 65 and over	Improved ..	1	..	..	..	..	..	..	..	1
	Stationary ..	..	..	..	..	..	..	..	..	..
	Worse	..	..	..	..	..	..	..	..	..
	Died	..	..	..	..	..	..	..	..	..

Of the above observation cases 8 were accepted as cases of pulmonary tuberculosis, 35 were not accepted, and 3 left the institution before completion of diagnosis.

The particulars in respect of the seven deaths shown under observation cases, in all cases confirmed by post-mortem examination, are as follows :—

Age	Sex	Cause of Death
47	M.	Carcinoma right lung.
20	M.	Pyæmia, gangrene of lung, bronchiectasis.
44	M.	Bronchial carcinoma, lung abscess, hæmoptysis, nephritis.
27	F.	Gangrene of lung, putrid bronchiectasis.
31	F.	Uræmia, chronic nephritis.
28	F.	Acute hæmorrhagic pancreatitis.
44	F.	Myocarditis, pericarditis.

Patients.

As in former years lectures have been given to patients, not only on salient facts that they should know about the disease, but also on matters of general hygiene and health. It is sometimes difficult to convince patients of their duty to carry out such measures as are necessary to safeguard the community as a whole.

Special Methods of Treatment.

Facilities for the surgical treatment of pulmonary tuberculosis, apart from artificial pneumothorax, are now available at certain of the voluntary hospitals. The number of cases so treated is as yet not many, and a summary will be presented when time has matured the results.

The value of sanocrysin and artificial pneumothorax, as separate treatments or used in conjunction, has proved to be high in carefully selected cases.

The use of biocholine as a palliative is again emphasized.

Occupational Treatment.

The past year has further proved that this now integral part of the routine treatment is a most valuable aid in maintaining that contentment of mind that is so important.

The articles made during the period have aimed towards utility rather than luxury. An improved type of bedside locker for patients on the verandahs and shelters has been produced by the carpentry section. These lockers have been much appreciated by those patients who so far have been provided with them.

Attention is again drawn to the difficulty in the disposal of articles made. It will always be difficult to develop that wide variety of crafts essential for the attainment of the maximum therapeutic effect along with assured commercial success. It is necessary, therefore, again to emphasise the urgent need of a wider market for the disposal of articles than at present exists.

Ex-patients who have been trained in a craft suffer equally in this respect. No definite channel for the disposal of articles made by them exists at present. Arrangements which would ensure a ready opportunity of sale whould be most helpful to these patients individually and would be of great practical value in the proper development of the whole scheme of occupational therapy.

REPORT ON THE WORK OF THE MIDWIVES' DEPARTMENT FOR 1931.

The Department deals with :—

A. The Inspection of Midwives under the Midwives Acts, 1902-1926.

B. Domiciliary Nursing Visits to Mothers and Babies, in connection with schemes for maternity and child welfare under the Maternity and Child Welfare Act, 1918.

C. The Investigation of Cases of—

(i.) Maternal death.
(ii.) Puerperal fever and pyrexia.
(iii.) Stillbirth and neo-natal death in midwives' practices.
(iv.) Pemphigus neonatorum.

Staff—

Inspector of Midwives.
Assistant Inspector of Midwives.
4 Maternity Nurses.
3 Ophthalmic Nurses. (See special report.)

A. *Inspection of Midwives.*

Total registered births for the City (adjusted figure)—

Live births	12,250	
Still births	628	
		12,878
Total notified births (live and still) (unadjusted figure) ..		13,480

Occurrence of Notified Births.

(1) Births at Home.	
(i.) Taken by midwives, including cases in which midwife acts as maternity nurse (figures based on yearly return of cases made by midwives to L.S.A.)	6,355
(ii.) Taken by doctors, no midwife present (include many non-booked cases)	470
(iii.) Taken by St. Mary's Hospital District Staff in Manchester Area	1,061
(2) Births in Institutions.	
(i.) Hospitals	4,713
(ii.) Maternity homes registered under Nursing Homes Registration Act, 1927	881
	13,480

Analysis of Cases Taken by Midwives.

	Number of Midwives	Midwives' own Cases	Cases at which Midwife acts as Maternity Nurse	Total Number Cases	Per cent. of Notified Births	Per cent. of Registered Live Births
1. Births at Home.						
Independent midwives—						
Certificated 112						
,, notify for emergency only 11						
,, practice in City, reside outside 24	151	5,146	914	6,060	45·18	49·46
(12 are general trained)						
bona fide practice 4						
Midwives employed by Nursing Association (all S.R.N.)	17	215	80	295	2·18	2·4
2. Births in Institutions.						
Midwives employed in Registered Maternity Homes, taking midwifery cases only and having no resident medical officer	38	481	117	598	4·43	4·8
	206	5,842	1,111	6,953	51·58	56·75

The number of midwives notifying intention to practice January, 1931, is the same as for January, 1930—206.

Of the independent practising midwives during the year, 1 died, 5 gave up work, and 4 new midwives started to practice. 21 midwives, either belonging to District Nurses' Associations or employed in Maternity Homes, moved away from the area (one died) and 23 moved into it.

Distribution of Domiciliary Cases (based on notified births).

		Per cent. Notified Births
7,886 births took place in domiciliary practice		= 58·5
distributed as follows :—		
Midwives alone at the birth	4,409	= 32·7
Registered medical practitioner summoned by midwife under C.M.B. rules and present at birth	952	
Registered medical practitioner with midwife as maternity nurse	994	= 17·92
Registered medical practitioner alone	470	
Hospital District Service	1,061	= 7·8

Changes in proportion of cases taken by midwives and midwives acting as maternity nurses, calculated on registered live births :—

	Per cent.
1929	60·26
1930	52·88
1931	56·75

Supervision and Instruction of Midwives.

Midwives were suspended from work on 129 occasions on account of contact with infection or being themselves liable to be a source of infection.

A case of puerperal fever occurred in a maternity home having no resident medical officer. Swabs were taken from the nose and throat of the nursing staff, and hæmolytic streptococci were isolated from the throats of two midwives, who were suspended from further work until subsequent swabs were negative.

There has been a steady fall in the number of suspensions occurring during the past three years. As there is a staff of trained nurses available to take over their cases, midwives are encouraged to report cases with raised temperature before they become notifiable under the Puerperal Pyrexia Regulations.

Suspensions.

1929	223	= 2·83	per 100	cases taken.
1930	165	= 2·27	,,	,,
1931	129	= 1·85	,,	,,

Under the Midwives Act, 1926, section 2 (1), 16 claims made by midwives for compensation for loss of work during suspension were paid by the Local Authority.

Visits made to midwives in their own homes 662

Midwives interviewed at the office 201

No serious breach of the Rules of the Central Midwives Board has occurred during the year.

A series of lectures given by the Medical Officer of Health and other specialists was much appreciated and well attended by the midwives.

The midwives are keen to learn and to improve and keep as high as possible their standard of practice. There is considerable improvement in the quality of the ante-natal work done.

6 midwives are approved by the Board to take pupil midwives for district experience.

Records of Calling in Medical Aid.

Midwives sent for a registered medical practitioner, in accordance with the Rules of the Central Midwives Board, on 2,874 occasions, and 1,598 applications for payment of their fees were made by registered medical practitioners.

	Number of Midwives' Cases	Number of Records Sent	Number of Records Sent per 100 Cases	Number of Applications for Payment	Number of Applications made per 100 Records
1930	6,142	3,236	52·6	1,718	53
1931	5,842	2,874	49·1	1,598	55·6

Number of cases referred by midwives to pre-maternity clinics in addition to above figures:—

1930 .. .. 405 = 6·59 per cent. of their cases.

1931 .. .. 338 = 5·78 „ „

Analysis of Records of Sending for Medical Aid.

(Records sent during the ante-natal period are excluded.)

21·06 per cent. of all records of sending for medical aid by midwives for emergencies occurring during labour, and the puerperium, were for delayed labour, or 8·6 per cent. of all the cases they take.

According to statements made by doctors when making application for payment of fees, forceps were applied in 53·3 per cent. of these cases. This gives a forceps rate of 4·4 per cent. for midwives' cases.

Some Reasons for summoning Medical Aid	Per cent. of Midwives' Cases
Torn perineum	12·5 (accounts for 36 per cent. of all records sent.)
Difficulty in the third stage, including P.P.H.	1·97
Raised temperature in the puerperium	1·02
Unsatisfactory eye condition in the baby	3·2

These figures include cases taken by midwives in registered maternity homes having no resident medical officer.

The number of requests for medical aid made by different midwives varies between limits as wide as 3 per cent. and over 80 per cent. of their cases, but owing to the differences in the number of cases each midwife takes too much cannot be made of these figures. Both the number of the records sent and the type of help asked for probably depends to some extent upon the characteristics, physical and social, of the patient and her environment. For example, tongue-tied babies are almost unheard of outside the Ancoats area, and the largest number of cases of cough and chest complications come from the overcrowded central districts of the City.

Payment of fee of the registered medical practitioner called in by the midwife, in accordance with the Rules, is made by the Local Supervising Authority under the authority of the Midwives Act, 1918, section 14 (1). The Local Supervising Authority has power to recover the fee from the patient, or husband, if they have the means to pay.

Particulars of applications from medical practitioners in 1931 for the payment of their fees :—

Number of families whose incomes were below the scale	581
,, ,, ,, ,, above the scale	880
,, ,, who paid doctor themselves	24
Conditions not fulfilled	36
No account sent (see Ophthalmia Neonatorum Regulations, 1926)	77
Number of fees paid by the Local Supervising Authority	1,538

Provision of the Services of Consultants for Difficult Child-birth.

Second Opinion.—Under the Notification of Puerperal Fever and Puerperal Pyrexia Regulations, 1926, a second opinion on his case may be obtained by a registered medical practitioner. A fee of £3 3s. for the consultation is payable by the Public Health Committee.

19 applications for payment of this fee were made in 1931.

Obstetric Difficulty.—In January, 1930, in connection with the Council's scheme for maternity and child welfare under the Maternity and Child Welfare Act, 1918, the provision of a consultant service was extended to allow medical practitioners to call in a consultant in the event of obstetric difficulty arising during the ante-natal period, labour, or the puerperium. The fee is fixed at £5 5s. inclusive.

12 applications for payment of this fee were made in 1931.

Consultants must, in every case, be selected from a list of approved practitioners engaged solely in gynæcological and obstetric practice in the city of Manchester.

B. *Domiciliary Nursing Visits to Mothers and Babies.*

The mothers and babies who are nursed or helped by the 4 trained nurse-midwives on the staff of the Department are referred to them from the following sources :—

(*a*) Midwives.
(*b*) Registered medical practitioners, under the Puerperal Fever, Puerperal Pyrexia, and Pemphigus Neonatorum Regulations.
(*c*) Health visitors.
(*d*) Maternity and child welfare clinics.

(*a*) *Midwives.*—Midwives cases may be—

(i.) Normal puerperal cases, with some septic condition, *e.g.*, a whitlow, which make it undesirable for the midwife to keep the case.

(ii.) Normal puerperal cases when the patient is in contact with an infectious disease, such as measles, and isolation cannot be obtained, to avoid the risk of the midwife carrying infection to other patients.

(iii.) Abnormal puerperal cases, in which either mother or baby has some condition diagnosed as septic, or thought likely to be so. According to her rules the midwife must either give up the case or remain in sole attendance.

(iv.) Cases in which there is some unsatisfactory condition of mother or baby at the end of the ten day lying-in period which requires further nursing, *e.g.*, inflamed veins, premature baby.

(*b*) *Cases from Doctors.*—An offer of skilled nursing is made to every practitioner who notifies a case under the Puerperal Fever, Pyrexia, or Pemphigus Neonatorum Regulations. The nurse then works under the direction of the patient's own doctor. For instance, if an incision into a mammary abscess has to be made, the nurse will attend at the house and assist the doctor and nurse the case afterwards.

(*c*) *Health Visitors' Cases.*—The nurse visits because the health visitor reports some abnormal condition of mother or baby, such as cracked nipples, prematurity, or insufficient breast milk.

(*d*) *Maternity and Child Welfare Clinics.*—The doctor at the clinic asks to have a baby treated for some condition, such as an unhealed umbilicus. A large number of cases for re-establishment of breast feeding come from the clinics.

The visits paid by the nurses under the above headings in 1931 were as follows :—

	Number of Visits
Puerperal Fever, Puerperal Pyrexia, Raised Temperature ..	1,595
Mammary Abscess and Mastitis	477
Phlebitis	98
Septic skin condition of mother	70
Pneumonia	2
Puerperal cases in contact with Scarlet Fever	13
Puerperal cases in contact with Measles	14
Mother still unsatisfactory at end of lying-in period	36
Pemphigus Neonatorum and other skin conditions	1,012
Septic and unsatisfactory umbilicus	1,715
Spina Bifida	25
Ophthalmia Neonatorum (see also special Ophthalmic section) .	75
Prematurity of infant	484
Promotion and re-establishment of breast-feeding	538
Unsatisfactory infants	198
Unclassified nursing visits	81
	6,433

Note on the Promotion of Breast-Feeding.

78 notifications of recourse to artificial feeding were received from midwives. In 13 cases it was resorted to by the doctor's orders, and in 7 because the baby was to be separated from its mother. Of the remaining 58 cases, in nearly half failure to breast-feed was said to be due to little or no secretion of breast milk. The other principal reasons are deformities of the nipples, poor condition of the mother's health, and disinclination to feed. Failure in an earlier pregnancy is often a predisposing factor in subsequent failure.

64 cases were visited by the special maternity nurses with a view to the re-establishment or promotion of breast-feeding. They were successful in 18 cases and partly successful in 5. The one essential factor to success is desire to breast-feed her baby on the mother's part. Given that, lapse of time since birth seems immaterial.

Special attention was paid to premature and weakly babies. 484 visits were paid, and they are visited until their condition is satisfactory and weight in the neighbourhood of 7 lbs.

For example, premature twins, weighing $2\frac{1}{2}$ and $2\frac{3}{4}$ lbs. at birth, at 3 months old weighed 7 lbs. each ; twins $3\frac{1}{2}$ lbs. and 3 lbs. at birth weighed 7 lbs. 3 ozs and 7 lbs. 2 ozs. at 6 months.

c. *The Investigation of Cases of—*

(i.) Maternal death.
(ii.) Puerperal Fever and Pyrexia.
(iii.) Still-birth and neo-natal death in midwives' practices.
(iv.) Pemphigus Neonatorum.

(i.) *Maternal Death.*

The history of every maternal death is investigated, in accordance with the request of the Ministry of Health, and the result forwarded to the Maternal Mortality Committee.

Apart from the medical enquiry, the midwife or other attendant at the birth is interviewed, and a visit made to the home.

These deaths include all maternal deaths coming within the scope of the enquiry undertaken at the request of the Ministry of Health. Since cases are included in which child-birth was not the primary cause of death, the figures are in excess of those compiled in accordance with the requirements of the Registrar General.

Cause	Normal full-term Labour	Abnormal full-term Labour	Abortion or Prematurity	Total	Rate per 1000 live Births
Puerperal fever	5	8	4	17	1·38
Other causes	37		5	42	3·42
	50		9	59	4·80

Analysis of 42 deaths due to other causes than puerperal sepsis :—

Hyperemesis gradivarum ..	1	Cerebral hæmorrhage	1
Eclampsia..	3	Post-operative shock	1
Ante-partum hæmorrhage ..	2	Peritonitis, following cæsarian section	1
Placenta prævia, followed by acute puerperal nephritis.	1	Ante-partum hæmorrhage ..	1
Dystocia	1	Puerperal insanity	2
Obstetric shock	2	Pneumonia and other chest conditions	8
Ruptured uterus	2	Pulmonary tuberculosis ..	2
Embolism in the brain ..	1	Cardiac conditions	6
Pulmonary embolism	2	Abortion	5

(ii.) *Puerperal Fever and Puerperal Pyrexia.*

Every case of puerperal fever and of puerperal pyrexia notified under the appropriate regulations is investigated at the patient's home address and by interviewing the attendants at the labour if thought desirable.

The table below sets out the number of cases notified as puerperal fever and puerperal pyrexia, and the diagnosis subsequently arrived at :—

	Number of Notified Cases	Changes in Diagnosis				Total Number of Cases Counted
		Puerperal Fever to Puerperal Pyrexia	Puerperal Pyrexia to Puerperal Fever	To Other Causes	Delivered Outside the City	
Puerperal Fever	139	− 2	+ 20	− 15	− 3	139
Puerperal Pyrexia	98	+ 2	− 20	..	..	80

Changes in diagnosis from puerperal fever to other causes were as follows :—

Erysipelas..	1	Septic laryngitis	1
Endometritis	1	Premature labour	1
Post-influenzual debility ..	1	Normal delivery	1
Serum sickness	1	Incomplete abortion	5
		Abortion	3

Analysis of Cases of Puerperal Fever and of Puerperal Pyrexia.

	Number of Cases	Abortion or Premature Labour		Deaths from Abortion	Full-term Labour		Deaths at Full Term	Attaek Rate per 1,000 Births		Case Fatality per cent.	
								1930	1931	Average Rate 1905–1930	1931
Puerperal Fever		At 2–3 months ..	45		Normal labour ..	37	5				
		,, 4 months ..	12		Abnormal labour .	35	8				
		,, 5 ,, ..	3		No particulars ..	1	..				
		,, 7 ,, ..	6								
	139		66	4		73	13	12·0	11·35	18·94	12·2
	The number ineludes 1 full-term labour and 3 abortions delivered in Manchester Hospitals, but brought in from outside districts.										
Puerperal Pyrexia		At 3 months ..	8		Normal labour ..	43	4				
		,, 4 ,, ..	3		Abnormal labour	17	1				
		,, 6 ,, ..	2		No particulars ..	4	..				
		,, 7 ,, ..	3								
	80		16	1		64	5				
	The number ineludes 9 eases delivered in Manchester Hospitals, but brought in from outside districts.										

The attendant at the confinement and the subsequent nursing care of the cases is given in the next two tables :—

	Midwife		Doetor ealled in by Midwife under C.M.B. Rules		Doctor (Number ineludes eases of Abortion)		Hospitals	
	Attacks	Deaths	Attaeks	Deaths	Attacks	Deaths	Attacks	Deaths
Puerperal Fever	23	1	17	5	79	5	20	6
							3 of these eases had received treatment prior to admission, and one died.	
Puerperal Pyrexia	16	2	6	..	31	1	27	3
							6 of these cases had received treatment prior to admission, and one died.	

	Nursed in Monsall	Died	Nursed in other Hospitals	Died	Nursed at Home	Died
Puerperal Fever	114	8	17	7	8	2
Puerperal Pyrexia	38	2	22	3	20	1

The causes of death in the puerperal pyrexia cases were :—

At Monsall Hospital .. .. Post-partum eclampsia.
Pneumonia.

Other Hospitals .. .. .. General peritonitis following cæsarian section.
Acute lobar pneumonia.
Pulmonary tuberculosis.

At home .. .. Pneumonia.

(iii.) *Still-birth and Neo-natal Death in Midwives' Practice.*

The following table gives the total number of still-births notified in the City during the year :—

Number of Still-births	Number in Practice of			Per cent. of Notified Births
	Midwives, including cases in which a Doctor is called in under C.M.B. Rules	Doctors, including cases with Midwife acting as maternity nurse	Hospitals	
758	186	138	434	5·62

Analysis of possible causes of 186 *still-births occurring in the practice of midwives.*—This includes cases in which medical aid was summoned by the midwife. It is noticeable that the largest single cause of death of the full-term fresh fœtus is breach delivery. Toxic conditions and poor health of the mother

account for most of the premature macerated fœtuses, and more information would probably allow of the inclusion under this heading of a large proportion of the cases not classified.

	Fætus Fresh		Fœtus Macerated	
	Full-term	Premature	Full-term	Premature
1. Illness of mother—				
Tuberculosis	1	1	..	..
Influenza	..	..	1	5
Probable specific disease	..	..	..	2
Albuminuria	2	..	1	2
Probable toxæmia	1	1	2	5
Poor health	3	3	2	8
2. Ante-partum hæmorrhage	1	5	..	3
3. Hydramnios	..	2	1	..
4. Accidents of labour—				
Violent 2nd stage	1	..	..	..
Instrumental delivery	17	..	..	..
Breech delivery	22	4	..	..
Prolapse of cord	6	1	..	..
Twin births	3	..	3	..
Abnormal cords	1	1	2	..
5. Congenital malformations	6	2	..	5
6. Lack of attention at birth	6	3	..	..
7. No sufficient reason shown	11	1	21	18
	81	24	33	48

Neo-natal Death in Midwives Practice.

There were 89 deaths. 9 occurred before a medical practitioner could be obtained.

The coroner was informed in these 9 cases.

	Number of Cases
No inquest considered necessary	5
Inquest verdicts	2
1. Hæmorrhage at base of brain due to inattention at birth. B.B.A.	
2. Asphyxia due to inattention at birth. B.B.A.	
Certificate given by doctor	1
Post-mortem without inquest (congenital heart disease)	1

(iv.) *Pemphigus Neonatorum.*

Pemphigus neonatorum is annually made notifiable by the Manchester City Council under the Infectious Disease (Notification) Act, 1889.

Pemphigoid skin rashes reported	Notified Cases	Notified at P.M.	Not Notified	Total Deaths	Death per cent. of all reported cases
64	29 (3 died)	4	31	7	10·93

Incidence of fatal cases per registered births :—

0·38 per 1,000 1929
0·29 ,, ... 1930
0·57 ,, ... 1931

Age at onset :—

	Under 2 weeks	2–3 weeks	3–4 weeks	8 weeks
Number of cases..	51	10	2	1

Occurrence of pemphigus neonatorum :—

Midwives		Doctors		Hospitals	
Attack	Death	Attack	Death	Attack	Death
36	5	2	..	26	2

50 of the cases were nursed by the special nurses.

Of the 64 cases reported, 48 were of a very mild character, the skin condition becoming normal in periods ranging from 1 to 3 weeks.

Among the 7 fatal cases, 2 babies were premature ; 1 of them had been circumcised. Of the remaining 5, 1 had conjunctivitis appearing at the same time as the rash, and 2 had a septic condition of the umbilicus.

Rapid spread of the lesions always appears at some stage in the fatal cases, but 3 babies dying respectively in 11, 15, and 17 days after the onset put up a good fight at first, and the early spread was slow, but became rapid at the end. One of these, dying in 17 days, took feeds badly from the first, but the other two, as well as the two dying in 8 and 5 days respectively, apparently fed well until shortly before death, and 1, dying after 11 days, appeared never to be satisfied with its feeds,

One baby died at 2 months, having had an earlier severe attack of pemphigus.

Nine cases took periods of from 4 to 7 weeks to clear up. This type is characterised by small blisters which do not spread, but fresh small lesions keep on appearing. Slow headling of the umbilicus was reported in 3 cases. In one the baby had boils and a cough. Mastitis, slight conjunctivitis, and very septic gums with the early appearance of decayed teeth were complications in 3 cases.

One institution had 9 cases, 4 of which appeared during 1 month, but there were no serious cases. One hospital district practice had 10 cases, 1 of them fatal, but occurrence was sporadic. Another practice had 8 cases and 2 deaths ; only 2 of the cases were close together, 1 of which died. A third had 5 cases, 2 of them with 1 death occurring in 1 month, and 3 less serious cases close together 2 months later.

Summary of Investigations made by the Inspectors of Midwives and Special Maternity Nurses.

	Number of Visits
Maternal deaths	59
Puerperal fever	115
Puerperal Pyrexia	66
After care in cases of puerperal fever and puerperal pyrexia	84
Still-births	261
After care in cases of still-birth	274
Neo-natal deaths	9
Medical records and payment of medical fees	52
	920

After Care of Cases of Puerperal Fever, Pyrexia, and Still-birth.

50 women who had suffered from puerperal fever or pyrexia were visited ; 36 were in good health, the others were urged to get medical care—4 were pregnant.

In cases of still-birth occurring in the practice of midwives, follow-up visits are paid at intervals of 6 months. 139 cases were visited during the period. 4 women were pregnant, 1 had aborted, 3 had had a living child, and 3 had had another still-birth.

Total number of visits made by the staff :—

Inspectors of Midwives	662
Domiciliary Nursing	6,433
Investigations	920
	8,015

OPHTHALMIC SECTION.

The work of the ophthalmic section is carried out by 3 fully-trained nurses with special ophthalmic training, under the supervision of the Assistant Inspector of Midwives. They visit and treat, under medical supervision, all cases of eye disease from birth to school age, when those who still have eye defects are transferred to the School Medical Officer.

Cases are referred by—

1. Midwives, under the rules of the Central Midwives Board.
2. Medical practitioners and hospitals, under the Ophthalmia Neonatorum Notification Order.
3. Medical officers at the Child Welfare Clinics.
4. Health visitors.

During the year 1931, 555 cases were visited. Of these, 300 were cases of eye disease in older children, and 255 cases of ophthalmia neonatorum. The total number of visits paid was 6,552.

Ophthalmia Neonatorum.

136 cases were reported by midwives, by medical record as having advised medical aid for unsatisfactory eye conditions, and 119 were notified by medical attendants (either private or at the Royal Eye Hospital) as cases of ophthalmia neonatorum.

Swabs were taken from the conjunctiva in all cases where possible, and sent to the Public Health Laboratory to be examined bacteriologically for the presence of gonococcus. Eighteen swabs were examined, and of these 6 gave a positive result. In cases where the result of the swab was positive the mothers were advised to seek medical advice either from their own doctor or from the V.D. Clinic.

Since June, 1930, 3 mothers have been revisited after an interval of 6 months, in cases where the result was positive.

It was ascertained that 2 were in very good health and had no discharge. One had removed from the district.

14 mothers were revisited where the examination of the swabs had shown the presence of pus cells. 3 of these mothers, who had given a history of discharge, reported that the discharge had cleared without treatment.

Of the remaining 11, 2 were under medical treatment for their general condition, the other 9 were in good health, and all stated they had no discharge.

The monthly rate of notified cases varies considerably, and there seems no special reason for the rise and fall in numbers. June and July head the list, followed by April.

TABLE A—1931. OPHTHALMIA NEONATORUM AND CONJUNCTIVITIS. HISTORY OF MOTHER.

	Age of Mother							Parity										Labour		Attendant not present at birth	No. of mothers having had previous cases of Ophth. Neon.	History of yellow discharge	Legitimacy	
	Under 20	20—	25—	30—	35 and Over	Not ascertained	Total	1	2	3	4	5	6	7	8	9+	Not Ascertained	Normal	Abnormal				Legit.	Illegit.
Notified Cases ...	5	30	41	25	18	—	119	46	26	19	10	8	3	3	—	4	—	114	5	6	6	2	106	13
Not Notified	2	31	40	32	31	—	136	31	36	22	15	8	9	5	3	7	—	129	7	5	3	1	133	3
Corneal Cases ...	—	—	3	—	—	—	—	1	—	1	—	1	—	—	—	—	—	3	—	—	—	—	2	1

Total cases notified 119
Total cases not notified 136

255

Table B—1931. Ophthalmia Neonatorum.

	Interval in days between birth and onset											Attended by				Where treated				
	1	2	3	4	5	6	7	8	9	10+	Total	Midwife	Doctor	Midwife and Doctor	Institution	Home	Out-Patients at Hospital	In-Patients at Hospital	No Doctor	Total
Notified Cases ...	4	12	12	5	7	7	9	22	14	27	119	68	12	4	35	81	22	16	—	119
Not notified	6	9	16	4	13	13	18	11	17	29	136	122	6	8	—	124	11	1	—	136

Total cases notified 119
Total cases not notified ... 136

Table C shows the day of onset, the attendant at birth, and the place of treatment.

The greatest number of onsets were on the eighth and ninth days of life, and in over one-half of the cases the first signs of disease appeared after the first five days.

205 cases were treated by private doctors and 50 received treatment at the Royal Eye Hospital.

In 3 cases there was involvement of the cornea of one eye (a decrease of 3 on last year). All were admitted into the Royal Eye Hospital. 2 completely recovered, the other, who had a perforated ulcer, died of broncho-pneumonia when 4 months old.

TABLE C.—RESULTS OF THE 119 CASES OF OPHTHALMIA NEONATORUM AND OF THE 136 OF CONJUNCTIVITIS IN NEWLY-BORN INFANTS.

	Complete recovery	One Eye blind, other normal	One Eye blind, the other damaged	Both Eyes lost	Both Eyes damaged	One Eye damaged	Death before recovery	Removed before recovery	TOTALS
Ophthalmia Neonatorum	114	1 (Died later)	..	..	..	..	2	2	119
Conjunctivitis ..	131	..	..	..	..	..	3	2	136

TABLE D.—TOTAL NUMBER OF CASES OF OPTHALMIA AND CONJUNCTIVITIS IN NEWLY-BORN INFANTS AND THE PERCENTAGE WITH CORNEAL COMPLICATIONS, 1911-1931.

Year	No. of Cases	Percentage with Corneal complications
1911	525	7·23
1912	667	11·39
1913	573	12·04
1914	681	9·25
1915	642	7·79
1916	620	6·13
1917	539	6·86
1918	567	8·64
1919	698	4·73
1920	974	4·83
1921	921	2·28
1922	604	2·3
1923	569	1·7
1924	572	2·0
1925	533	1·3
1926	478	2·7
1927	444	2·7
1928	375	1·0
1929	334	1·7
1930	321	1·8
1931	255	1·1

Eye Diseases in Older Children.

During the year the following new cases were visited by the ophthalmic nurses :—

Simple conjunctivitis	193	Corneal ulcer	2
Purulent conjunctivitis	20	Nebula cornea	13
Blepharitis	8	Phlyctenule	6
Lacrymal obstruction	37	Keratitis	1
Dacryocistitis	2	Coloboma iridis	3
Hordeolum	2	Congenital cataract	5
Congenital anophthalmos ..	1	Malformation of one eye ..	3
Blindness following meningitis	1	Mole	1

Enucleation of one eye following injury 2

All the more serious cases involving the cornea made satisfactory progress, and during the year no loss of eyesight resulted. It is to be noticed that affections of the cornea are becoming fewer. None were brought to the notice of the department, following measles, during 1931.

At the end of the year 85 of the above cases were carried over into 1932.

Sunshine Home for Blind Babies.

During the year 2 children were maintained in the Sunshine Home for Blind Babies at Southport. One of these children suffered from a congenital absence of lens, the other child suffered from coloboma of iris and choroid. The maintenance of 1 of these children has now been transferred to the Education Department owing to his having attained the age of 5 years.

CHILD WELFARE CENTRES.

The table on page 178B shows in statistical form the work done at the Child Welfare Centres during the year 1931.

At the end of 1931 there were 20 municipal infant welfare centres and one voluntary centre in the Holy Name Schoolroom, to which the City supplies the medical officer and the stationery. This centre is otherwise staffed by the Sisters of Charity of the Order of St. Vincent de Paul.

The twentieth centre was opened at the beginning of the year in the Community Hall, Hart Road, Wilbraham Estate, where one weekly infant welfare session is held. This centre is the first one to be specially provided for the inhabitants of one of the new housing areas.

In October the Withington Centre was transferred from the Mauldeth Road Gospel Hall to 25, Heaton Road, Withington, in a house which was acquired for the purpose by the Corporation. The provision of these more suitable premises made it possible to begin an ante-natal session and to provide massage and remedial exercises.

There are now, at the various centres, 88 weekly sessions for children, including 4 special toddlers' sessions. At these latter an attempt is made to secure only the attendances of children from 2–5 years, but it is unavoidable that some younger children should be brought.

At the end of the year there were :—

5,300 children under 1 year on the centre register.
4,137 children between 1 and 2 years on the centre register.
5,413 children between 2 and 5 years on the centre register.

59 per cent. of children under 1 year attended at least once.

204,654 attendances were made at these sessions :—

107,115	by children	under 1	year.		
50,215	,,	between 1	and 2	years.	
27,074	,,	,,	2 and 3	,,	
13,674	,,	,,	3 and 4	,,	
6,576	,,	,,	4 and 5	,,	

The poor health of a number of the children under 5 years continued to cause concern. It is seen from the above figures that many cease to attend the centres, and that many never attend even in infancy.

Toddlers' Sessions.

In October a weekly examination session was set apart at Newton Heath, Collyhurst, Ancoats, and Openshaw Centres. To the parents in these wards, as their children attain their second and third birthdays, a letter has been sent emphasising the need for continued medical supervision, and inviting them—if they are unable to obtain it otherwise—to bring their children for examination.

In the last 4 months of the year, 785 invitations were sent to 2 year olds, of whom 228 were brought for examination, and 742 were sent to 3 year olds, of whom 214 were brought for examination.

Massage and Remedial Exercises.

Massage treatment is provided at 18 centres, where 49 weekly sessions were held. At 6 centres a weekly class of remedial exercises is held for children from 2 to 5 years, for whom exercises are considered better than massage. The ailments treated are postural defects, rickety deformities, general or local poor muscular tone, and some of the milder birth injuries.

There were 23,662 attendances for massage and 3,203 for remedial exercises.

The department employs a staff of 8 full-time masseuses, and employs part-time masseuses for 13 weekly sessions.

Artificial Sunlight.

Lamps for ultra-violet ray treatment are installed at Ardwick, Rosamond Street, Cheetham, and Newton Heath Centres. 18 weekly sessions are held and 22,124 treatments were given.

1,110 individuals were given general irradiations. 99 of these were adults and 1,011 children.

34 adults and 407 children ceased to attend before completion of their treatment.

As in former years, the chief diseases for which the children were treated were rickets, debility, and malnutrition.

A small number were treated for slight nervous manifestations, cervical adenitis, fits, rheumatism, and catarrh.

The general results in the cases of children who attended regularly until the end of the course of treatment were very satisfactory, and were particularly noticeable in cases of debility following some serious illness.

88 children were notified to attend for re-examination, and 75 did so. Of these, 15 were recommended for a second course of treatment, as their condition was not quite satisfactory.

23 expectant mothers received treatment for various disorders of pregnancy. Only 8 of these ceased to attend, the remainder coming for treatment to within a short time of their confinement. Several of these asked to have a further course after confinement—evidence of the good results the treatment had in these cases.

26 nursing mothers were treated and 15 ceased to attend for various reasons. The general tonic effect was noticeable here also, the mothers being able wholly or partly to breast-feed their babies to nine months.

Dental Clinics.

A session for dental treatment for nursing and expectant mothers has been held at Rosamond Street since 1917, and in 1930 an additional session was added for children under 5 years of age. The attendances increased slowly, and in 1930 there were 1,064 attendances of mothers and 735 of children, more than could be adequately dealt with at each session.

In January, 1931, the Cheetham Centre was equipped for dental treatment, and a combined session for mothers and children begun. In October a separate session was provided for children.

During the year there were 1,339 attendances of mothers and 1,129 of children.

The work grows only slowly, the mothers are sent from the infant welfare centres, and the condition of their mouths is such that mostly only extractions can be done.

For the children no general routine inspection has yet been arranged. Children with suspected or beginning dental caries are referred from the welfare centres to the dental clinic, where preliminary dental treatment is given. The parents then receive regular 3 or 6 monthly invitations to bring them for further inspection and treatment until they reach the age of 5 years. The welfare centres are notified when these appointments are not kept, and a beginning has thus been made in the care of the teeth of young children. Unfortunately many parents remain too indifferent to take their children to the dental clinics.

Systematic talks on the influence of diet on dental structure and the prevention of caries are given at all the centres and at the dental clinics.

Cookery Classes.

It is recognised that one of the causes of the ill-health of the child under 5 years is an unsuitable diet, and it was considered advisable to provide at nfant welfare centres classes where mothers could be taught the values of food and its preparation, while young children were " minded " at the centres.

Weekly classes were begun in 1930 at Ancoats, Newton Heath, and Rosamond Street Centres, and 835 attendances were made.

In May, 1931, classes were started at Openshaw, Clayton, Ardwick, and Hulme. In 1931, 2,163 attendances were made. The class at Ancoats was so successful that a second session was added, and 766 attendances were made, as against 307 in 1930. The classes at Newton Heath,and Clayton are also well attended ; the others are not. Unfortunately the poor attendance at these classes reflects the indifference of many parents to the principles of right feeding.

Voluntary Workers.

The department is greatly indebted to the voluntary workers supplied by the Schools for Mothers, for the cordial co-operation they give in the work of the centres by entering the new babies, registering the attendances, and charting the heights and weights of the children.

At Ancoats, Hulme, Rosamond Street, and Clayton the Schools for Mothers held sewing classes during the Winter, and 981 attendances were made.

Ante-natal and Post-natal Care.

Ante-natal clinics are established at 14 centres, where 18 weekly sessions are held. Bi-weekly sessions are held at Openshaw and Rusholme ; at Higher Ardwick and Hulme they are combined with V.D. treatment for mothers and children. 2,335 new mothers were admitted, and 11,416 attendances were made.

Every attempt is made to secure the attendance of mothers for post-natal examination, and 801 attendances were made.

The after-effects of child-birth continue to give rise to concern; By arrangement with the physio-therapy department of one of the voluntary hospitals, a post-natal exercises class for mothers was started at Ardwick Centre in June, and 88 attendances were made by mothers. In July a temporary experimental session was begun at Rusholme Centre, and 137 attendances were made.

In addition to the ante-natal sessions provided at the infant welfare centres, there are municipal ante-natal clinics established at Crumpsall and Withington Hospitals (see Hospitals Report, page 91).

Immunisation against Diphtheria.

At all the infant welfare centres, immunisation is carried out by the centre doctors, and periodic compaigns are held to stimulate the interest of parents. 692 children were so immunised.

Ailing Children.

Twenty beds for children under 1 year and 10 for children between 1 and 2 years are retained at the Manchester Babies' Hospital (see page 187), and 8 beds in the Babies Ward at Monsall Hospital (see page 125).

350 beds for children under 5 years are provided at the Booth Hall Hospital.

For some years now the names of children under 2 years of age who have been patients in Booth Hall Hospital have been notified to the Maternity and Child Welfare Department on discharge, and the cases have been visited immediately, and followed up, by the health visitors. When the transfer of this hospital to the Public Health authority took place in 1930, the lists were extended to include all discharged cases under 5 years of age, and in addition brief clinical notes on each case have been given. During 1931 further clinical notes have been sent to this department with reference to children under 5 years who have died in the hospital. These notes are of great assistance to the health visitors, and are attached to the child's case sheet as part of the record of its first 5 years. When any of these children are attending an infant welfare centre, copies of the clinical notes are sent to the medical officer of the centre and are attached to the child's centre record.

Remedial Day Nurseries.

Two such nurseries are maintained by the Schools for Mothers, one next door to the Openshaw Centre, and one, the Spence Nursery, in the grounds of the University Settlement at Ancoats. The nurseries are maintained for children between 18 months and 5 years suffering from rickets, malnutrition, and debilitated conditions. Cases for these nurseries are recommended by the centre doctors. The children are retained until they are well, or reach 5 years of age.

The Corporation retains 5 beds at each of the nurseries.

Openshaw Day Nursery. January to December, 1931.

Total number of places for children under 5 years	13
,, ,, whole day attendances	2,279
,, ,, individual children who attended	27
Number of individual children admitted as Corporation cases	16

(The period of stay varied from 1 week to 12 months.)

Spence Day Nursery.

Total number of places for children under 5 years	22
,, ,, whole day attendances	4,208
,, ,, individual children who attended	36
Number of individual children admitted as Corporation cases	16

(The period of stay varied from 1 week to 12 months.)

Expectant Mothers.

Centre	No. on Register Jan. 1st, 1931	No. of New Cases	Transferred from another Centre	Total	No. still on Register Jan. 1st, 1932	No. of "Term" Births	Still-births included in "Term" Births	No. of Premature Births	Still-births included in Premature Births	No. of Mothers left District before Confinement	Transferred to another Centre	No. of Mothers not Pregnant	Total
Ancoats	45	148	..	193	37	120	4	20	2	6	..	10	193
Ardwick	75	263	2	340	57	240	5	11	2	7	1	24	340
Chorlton-upon-Medlock ..	35	179	..	214	58	121	4	12	3	10	..	13	214
Collyhurst	57	192	2	251	37	186	5	10	2	2	1	15	251
Cheetham	36	137	..	173	37	105	1	3	..	12	1	15	173
Clayton	25	140	..	165	41	92	2	11	..	7	..	14	165
Gorton	49	166	..	215	49	154	7	1	..	4	2	5	215
Harpurhey	31	114	..	145	38	88	1	9	2	3	..	7	145
Hulme	30	100	..	130	27	79	4	8	..	2	..	14	130
Levenshulme	28	113	2	143	40	90	8	..	..	6	..	7	143
Newton Heath	35	213	..	248	53	162	5	5	2	9	1	18	248
Openshaw	67	268	1	336	49	237	12	18	6	4	1	27	336
Rusholme	82	274	1	357	82	226	5	24	15	7	1	17	357
Withington	..	28	..	28	22	1	..	1	..	..	..	4	28
Totals	595	2,335	8	2,938	627	1,901	63	133	34	79	8	190	2,938

Expectant Mothers.

Centre	No. of Normal Births	No. of Abnormal Births	Died	Attended for Post-natal examination
Ancoats	109	31	—	27
Ardwick	221	30	—	123
Chorlton-upon-Medlock ..	101	32	—	78
Collyhurst	163	33	1	32
Cheetham	91	17	—	45
Clayton	79	24	—	20
Gorton	144	11	1	48
Harpurhey	73	24	2	24
Hulme	60	27	1	25
Levenshulme	76	14	2	30
Newton Heath	140	27	—	35
Openshaw	211	44	1	40
Rusholme	199	51	2	170
Withington	1	1	—	—
Totals	1,668	366	10	697

Causes of Deaths of Mothers attending the Ante-Natal Clinics during the Year.

Acute respiratory conditions during pregnancy and puerperium 5

Puerperal Septicæmia and albuminaria 1

(This case refused hospital and was referred to a private doctor. Treatment given at home. Delivery forceps and macerated fœtus.)

Cardiac disease 1

Placenta prævia and acute puerperal nephritis 1

Puerperal sepsis. Low forceps 1

Hyperemesis gravidarum. Forceps delivery 1

Comparison of Children in Age Groups attending the Child Welfare Centres, December 31st, 1931.

Centre	On Register at beginning of year			New patients			Transferred from age group	Transferred from other Centres	Transferred to other Centres	Died	Marked off not attending			On Register, January 1st, 1932		
	0—1	1—2	2—5	0—1	1—2	2—5					0—1	1—2	2—5	0—1	1—2	2—5
Abbey Hey	144	119	103	160	31	45	368	12	11	9	22	82	96	115	114	149
Ancoats	335	237	325	407	81	180	764	37	26	43	80	199	277	303	229	373
Ardwick	477	377	451	689	125	182	1,134	12	66	50	127	269	421	474	389	448
Blackley	126	63	107	213	47	76	320	7	12	2	27	67	104	149	125	131
Cheetham	284	197	223	426	75	127	678	14	22	16	79	168	218	307	232	270
Chorlton-cum-Hardy	169	140	128	214	39	60	433	21	14	7	38	89	150	161	136	157
Clayton	173	149	220	231	48	111	468	5	22	13	44	104	190	155	144	212
Chorlton-upon-Medlock	425	245	320	626	116	178	1,064	47	35	34	110	264	355	433	308	352
Collyhurst	315	274	289	473	114	254	766	14	29	47	99	226	298	332	230	423
Didsbury	129	80	79	147	18	45	281	7	9	4	21	84	97	109	85	89
Gorton	409	300	295	590	109	157	924	42	43	22	125	257	281	436	304	401
Harpurhey	270	213	244	301	58	89	643	5	23	12	66	123	196	222	213	287
Holy Name	41	33	32	48	5	9	103	19	7	2	7	27	33	46	25	33
Hulme	325	198	217	389	71	98	682	16	23	28	74	231	224	281	197	226
Levenshulme	236	163	177	345	53	121	545	17	22	10	74	108	140	235	217	268
Miles Platting	150	104	128	198	51	58	348	16	15	14	29	102	132	143	119	132
Newton Heath	287	215	240	428	97	212	686	7	26	22	73	171	214	306	246	363
Openshaw	333	268	361	499	112	269	897	36	39	25	87	259	368	362	225	449
Rusholme	412	324	310	514	72	122	789	55	132	20	145	257	260	364	276	321
Withington	278	189	197	367	36	89	571	78	25	7	94	140	157	275	251	251
Wilbraham	—	—	—	133	31	45	124	75	7	2	5	8	12	92	72	78
Total 1931	5,318	3,888	4,446	7,398	1,389	2,527	12,593	542	608	389	1,426	3,235	4,223	5,300	4,137	5,413
„ 1930	4,544	3,012	3,423	7,502	1,429	2,177	11,757	516	494	345	991	2,923	3,531	5,318	3,888	4,446
„ 1929	4,266	3,122	3,392	6,905	1,336	1,892	11,777	582	672	421	828	3,600	4,438	4,544	3,012	3,323

Comparison of Registered Births and New Cases Attending the Centres during 1931.

Ward	Registered Births	New cases under 1 year at Centre	Per-centage
All Saints	448	230	51·34
Ardwick	535	422	78·87
Beswick	509	243	47·74
Blackley	258	155	60·07
Bradford	437	302	69·10
Cheetham	331	187	56·49
Chorlton-cum-Hardy	467	313	67·02
Collegiate Church	266	155	58·27
Collyhurst	476	273	57·35
Crumpsall	231	152	65·80
Didsbury	327	127	38·84
Exchange	2	—	—
Gorton North	279	182	65·23
,, South	427	226	52·92
Harpurhey	344	211	61·33
Levenshulme	226	149	65·92
Longsight	259	144	55·59
Medlock Street	567	378	66·66
Miles Platting	492	295	59·95
Moston	306	158	51·63
Moss Side East	363	219	60·33
,, West	237	170	71·73
New Cross	601	338	56·23
Newton Heath	305	179	58·68
Openshaw	405	225	55·55
Oxford	7	—	—
Rusholme	313	189	60·39
St. Ann's	1	—	—
St. Clement's	133	77	57·89
St. George's	533	286	53·65
St. John's	90	58	64·44
St. Luke's	503	351	69·77
St. Mark's	420	225	53·57
St. Michael's	427	213	49·88
Withington	628	409	65·12
Wythenshawe	97	28	28·87
Totals	12,250	7,269	59·33

Milk was supplied to necessitous nursing and expectant mothers, and to children under 5 years who were attending a centre, and for whom the doctor at the centre certified that milk was necessary on grounds of health. For children over 3 years old a certificate was required, stating the disease from which the child was suffering.

Both dried and fresh milk were used. The dried milk was bought in bulk from the manufacturers and distributed through the centres. The fresh milk was delivered by the retailers; usually one retailer for each centre. The selection was made from a list of those who had satisfactory pasteurising plant. Only pasteurised milk was ordered.

The milk was granted to applicants, after investigation, either "free" or "assisted" (half-price), according to income.

SUBSIDISATION OF MATERNITY BEDS.

Six maternity beds (2 in St. Mary's Hospital for first and abnormal cases, 2 in Denison House, and 2 in Crossley Hospital) are maintained by the City.

During the year 1931, 170 applications were received. 40 of these were cancelled, 1 was not accepted as the applicant was unsuitable, and 1 was refused owing to a gross mis-statement of income. Of the remaining 128 applicants 91 were confined during the year.

NURSING HOMES REGISTRATION ACT, 1927.

There were 32 registered nursing homes in Manchester at the beginning of 1931. 8 were registered for maternity patients; 7 for medical patients; 6 for maternity, medical, and surgical patients; 4 for medical and surgical patients; 4 for maternity and medical patients; 2 for surgical patients; and 1 for medical and surgical patients.

During the year 1931, 2 applications for registration were received. 1 was granted, and one was refused owing to unsuitability of premises. In connection with these homes 3 visits were paid.

59 visits were paid to homes already registered, and 2 visits to premises suspected of being used as nursing homes but which did not come within the meaning of the Act.

2 registrations were cancelled owing to keepers leaving premises.

The total registrations for 1931 were 5, and total number of visits paid 64.

PROVISION OF MILK FREE OR AT REDUCED COST DURING THE YEAR 1931, COMPARED WITH THE YEAR 1930.

Statement Showing Number of Cases receiving Milk, Amount Supplied, Cost, and Mode of Distribution.

			70–72, Rosamond St. West, C.-on-M.	1, Manipur St., Openshaw	153, Cheetham Hill Road	135, Pollard St., Ancoats	93, Hamilton Street, Collyhurst	230, Hyde Road, West Gorton	42, Lower Moss Lane, Hulme	45, Higher Ardwick, Manchester	Jubilee School, Conran Street	St. George's School, Abbey Hey Lane	686, Oldham Rd., Newton Heath	Elm Street, Miles Platting	St. Peter's Church, Levenshulme	Welsh Church Hall, Moss Lane East	26, Clayton Street, Clayton	Blackley U.M. Schools	Chorlton-cum-Hardy Baptist School	Withington 25, Heaton Road	Wilbraham Estate	Totals
Number of New Cases put on Milk	Fresh Milk ..	1931.. ..	211	256	98	266	294	211	195	156	122	50	106	91	51	170	82	14	24	97	55	2,549
		1930.. ..	243	245	80	203	244	194	146	185	103	43	65	72	54	167	101	22	24	31	—	2,222
	Dried Milk ..	1931.. ..	136	90	63	102	104	239	86	238	74	25	55	57	50	49	33	32	45	32	15	1,525
		1930.. ..	145	92	35	89	95	153	105	253	69	25	40	70	37	51	60	16	15	18	—	1,368
Attendances of persons for Milk	Fresh Milk ..	1931.. ..	4,935	5,293	2,391	4,849	5,864	3,156	3,152	4,618	2,785	892	1.515	1,516	1,246	4,645	2,775	239	724	1,858	880	53,333
		1930.. ..	4,141	4,643	1,572	3,558	3,922	2,933	2,798	3,446	2,259	646	773	900	1,038	2.877	1,837	266	317	290	—	38.216
	Dried Milk ..	1931.. ..	3,924	3,202	1,361	2,738	3,591	5,154	2,693	6,096	2,180	1,083	941	1,112	1,276	1,391	914	439	509	643	182	39.429
		1930.. ..	3,159	3,409	948	2,799	3,596	4,746	2,401	5,013	1,596	3,849	738	1,195	802	2,010	1,228	108	242	159	—	34,998
Amount of Milk supplied (pints or lbs.)	Fresh Milk ..	1931.. ..	35,373	37,723	16,749	33,959	41,034	21,167	22,611	32,549	20.228	6,292	10,612	10,612	8,728	32,645	19,432	1,703	5,067	13,006	6,443	375,933
		1930.. ..	25,302	32,068	11,185	24,950	27,566	20,542	19,578	24,396	15,960	3.663	5,420	6,266	7,309	20,201	12,850	1,911	3.004	2,030	—	269.227
	Dried Milk ..	1931.. ..	4,542	3,870	1,546	3,096	3,935	6,155	3,249	6,914	2,560	1.204	1,030	1,209	1,578	1,626	1,048	528	565	709	227	45,591
		1930.. ..	3,555	3,979	1,024	3,272	4,107	5.675	2,790	5,557	1,898	1,008	872	1,394	927	2,371	1,436	130	178	193	—	40.266
Total Cost to Corporation	Fresh Milk ..	1931.. ..	£ s. d. 330 5 0	£ s. d. 350 17 1	£ s. d. 162 8 3	£ s. d. 320 3 6	£ s. d. 395 10 8	£ s. d. 205 7 11	£ s. d. 214 19 1	£ s. d. 302 4 9	£ s. d. 211 9 1	£ s. d. 54 2 5	£ s. d. 91 8 2	£ s. d. 102 19 2	£ s. d. 68 2 7	£ s. d. 323 11 2	£ s. d. 198 6 4	£ s. d. 19 7 5	£ s. d. 47 12 0	£ s. d. 127 6 3	£ s. d. 61 6 10	£ s. d. 3,587 7 8
		1930.. ..	323 2 9	352 3 8	125 9 1	278 5 2	306 1 11	230 15 7	225 10 3	264 1 1	181 19 8	45 11 3	54 7 3	61 10 4	66 0 0	228 1 6	144 4 7	22 6 0	33 9 1	19 14 11	—	2,962 14 1
	Dried Milk ..	1931.. ..	247 15 10	207 15 6	95 13 2	161 0 0	221 4 11	336 11 0	194 14 10	369 16 8	162 16 11	60 7 7	51 2 2	63 2 8	82 2 11	92 3 5	57 15 4	33 10 10	30 1 5	42 5 8	13 2 8	2,523 3 6
		1930.. ..	212 3 5	212 9 9	63 10 9	193 13 3	245 15 6	348 15 1	172 6 8	314 16 3	124 7 2	57 2 4	40 10 2	76 10 5	49 17 2	145 10 8	83 16 11	9 4 2	10 19 8	13 0 2	—	2,374 9 6
Total	Fresh and Dried Milk ..	1931.. ..	578 0 10	558 12 7	258 1 5	481 3 6	616 15 7	541 18 11	409 13 11	672 1 5	374 6 0	114 10 0	142 10 4	166 1 10	150 5 6	415 14 7	256 1 8	52 18 3	77 13 5	169 11 11	74 9 6	6,110 11 2
		1930.. ..	535 6 2	565 13 5	188 19 10	471 18 5	551 17 5	579 10 8	397 16 11	578 17 4	306 6 10	102 13 7	94 17 5	138 0 9	115 17 2	373 12 2	228 11 6	31 10 2	44 8 9	31 15 1	—	5,337 3 7

Statement of Work Done at the Child Welfare Centres during the Year 1931.

	Year	Chorlton-upon-Medlock	Openshaw	Ancoats	Collyhurst	West Gorton	Cheetham	Hulme	Ardwick	Abbey Hey	Newton Heath	Harpurhey	Elm Street	Holy Name	Rusholme	Levenshulme	Clayton	Didsbury	Withington	Chorlton	Blackley	Hart Road	Totals
Consultations	1931	6,505	6,283	4,623	5,600	6,942	4,094	3,920	6,915	2,400	5,472	4,389	2,209	600	4,365	4,440	2,959	1,268	3,715	2,503	1,773	1,006	81,943
	1930	6,131	6,853	5,882	5,657	6,770	3,971	3,861	7,457	2,290	5,147	3,997	2,332	647	5,370	3,950	2,489	1,277	3,497	2,382	1,170	..	81,130
Babies Weighed only	1931	9,208	6,854	6,953	7,727	8,911	6,320	5,996	12,013	3,424	5,845	7,180	3,060	588	10,386	6,772	3,805	2,336	6,258	4,166	2,991	2,945	122,711
	1930	7,587	8,203	7,088	8,540	8,925	5,797	6,657	12,063	4,065	5,647	7,063	3,593	703	10,243	6,552	4,800	1,850	4,874	3,023	1,931	..	119,204
Total Babies attending	1931	15,713	13,137	11,576	13,327	15,853	10,414	9,916	18,928	5,824	11,317	11,569	5,269	1,188	14,751	11,172	6,764	3,604	9,973	6,669	4,764	2,945	204,654
	1930	13,718	15,056	12,970	14,197	15,695	9,768	10,518	19,520	6,355	10,794	11,060	5,925	1,350	15,613	10,502	7,289	3,127	8,371	5,405	3,101	..	200,334
Individuals who attended Centres	1931	1,550	1,502	1,241	1,361	1,513	1,063	1,017	1,800	499	1,200	940	519	153	1,409	951	767	394	993	610	520	284	20,286
	1930	1,394	1,369	1,215	1,289	1,375	961	989	1,808	473	1,014	971	573	145	1,445	748	744	360	849	567	392	..	18,681
Number of Attendances for Massage	1931	1,995	2,351	1,736	2,160	1,386	1,772	1,512	1,995	634	1,507	1,108	775	..	1,364	946	1,113	..	..	638	670	..	21,962
	1930	1,574	2,638	1,992	2,018	1,306	1,690	1,237	1,946	606	1,540	1,114	928	..	1,185	478	1,089	..	..	300	498	..	22,849
Number of Attendances for Remedial Exercises	1931	374	..	..	..	..	331	..	F 88 Mothers	884	..	..	..	..	898 Children	268	448 Children	..	..	..	..	..	201 Children
		..	..	..	..	..	..	..	..	..	..	..	..	..	D 137 Mothers	..	H 22 Mothers	..	..	..	..	..	147 Mothers
	1930	508	..	..	..	..	B 321	..	..	C 184	..	..	..	..	684 Children	B 196	721 Children	..	..	..	..	..	2,874 Children
Number of Attendances for Sunlight	1931	6,281	..	..	..	..	3,520	..	7,854	..	4,469	..	..	..	..	..	..	..	..	..	..	..	22,124
	1930	5,005	..	..	..	..	2,823	..	5,328	..	3,205	..	..	..	..	..	..	..	..	..	..	..	16,361
Number of Attendances at Cookery Classes	1931	291	G 126	766	..	..	..	G 236	G 156	..	339	..	..	..	..	..	G 249	..	..	..	..	..	2,163
	1930	A 175	..	E 307	..	..	..	..	..	..	E 353	..	..	..	..	..	..	..	..	..	..	..	635
Number of Attendances at Ante-natal Clinic	1931	831 A.N. 41 P.N.	1,095 A.N. 100 P.N.	713 A.N. 14 P.N.	966 A.N. 7 P.N.	830 A.N. 25 P.N.	945 A.N. 44 P.N.	685 A.N. 56 P.N.	1,143 A.N. 116 P.N.	..	1,093 A.N. 67 P.N.	536 A.N. 40 P.N.	..	..	1,381 A.N. 215 P.N.	632 A.N. 38 P.N.	606 A.N. 27 P.N.	..	I 60 A.N. 4 P.N.	..	..	..	11,416 A.N. 801 P.N.
	1930	722 A.N. 14 P.N.	787 A.N. 54 P.N.	837 A.N. 54 P.N.	1,107 A.N. 34 P.N.	861 A.N. 18 P.N.	552 A.N. 43 P.N.	703 A.N. 40 P.N.	1,249 A.N. 133 P.N.	..	843 A.N. 13 P.N.	499 A.N. 1 P.N.	..	..	509 A.N. 195 P.N.	342 A.N. 4 P.N.	795 A.N. 28 P.N.	..	..	..	..	..	10,806 A.N. 631 P.N.
Number of Attendances at V.D. Clinics	1931	..	..	..	..	..	..	592	703	..	..	..	..	..	..	..	..	..	..	..	..	..	1,295
	1930	..	..	..	..	..	..	532	825	..	..	..	..	..	..	..	..	..	..	..	..	..	1,357
Number of Attendances at Dental Clinics	1931	855 Mothers 781 Children	..	..	..	..	484 Mothers 348 Children	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,339 Mothers 1,129 Children
	1930	1,064 Mothers 735 Children	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,064 Mothers 735 Children

A From May, 1930. B From May, 1930. C From October, 1930. D From January, 1931. E From March 1930. F From June, 1931. G From May, 1931. H From September, 1931. I From October, 1931.

Exemption from Registration of Voluntary Hospitals.

During 1931 16 applications were received for exemption under section 6 of the Nursing Homes Registration Act, 1927.

1 exemption was granted.

15 of the applications were made at the end of the year, so were not dealt with during 1931.

Summary of Work for the Year 1931.

No. of applications for registration		Maternity	2
		Maternity and others	—
		Others	—
No. of homes registered ..		Maternity	1
		Maternity and others	2
		Others	2
No. of Orders made	Refusing	Maternity	1
		Maternity and Others	—
		Others	—
	Cancelling	Maternity	1
		Maternity and others	1
		Others	—
No. of applications for exemption from registration		Maternity	—
		Maternity and others	2
		Others	14
No. of cases in which exemption has been—	Granted	Maternity	—
		Maternity and others	—
		Others	1
	Withdrawn	Maternity	—
		Maternity and others	—
		Others	—
	Refused.....	Maternity	—
		Maternity and others	—
		Others	—

HOME HELPS.

The arrangements for the supply of Home Helps in Manchester are made by the Manchester Home Helps Society.

The Society is subsidised by the Public Health Committee.

During the year 1931, 16 Home Helps attended 146 cases for a total of 323 weeks, this being an average of 2·2 weeks per case.

The amount received in fees was £193 9s. 6d.

The Helps are remunerated at the rate of 30s. per week, plus travelling expenses and insurance. They receive no retaining fee when unemployed.

Eighteen free Home Helps were granted by the Public Health Committee. These cases extended over a period of 39 weeks. Two free Home Helps were granted by the Society itself, and these cases covered a period of four weeks. The remainder of the cases dealt with by the Society paid the costs of the Home Helps to the extent shown in the following table :—

Cases	No. of Weeks Attended	Rate per Week	Amounts Paid by Patients
		s. d.	£ s. d.
1	2	1 0	0 2 0
3	8	1 6	0 12 0
2	5	2 0	0 10 0
11	25	2 6	3 5 0
1	2	3 0	0 6 0
1	2	4 0	0 8 0
11	24	5 0	6 0 0
4	8	6 0	2 8 0
1	2	6 3	0 12 6
1	2	7 0	0 14 0
5	12	7 6	4 10 0
3	6	8 0	2 8 0
1	3	8 4	1 5 0
1	2	9 6	0 19 0
12	27	10 0	13 0 0
1	2	10 6	1 1 0
4	9	12 0	5 8 0
6	12	12 6	7 10 0
1	2	13 0	1 6 0
1	2	14 0	1 8 0
1	2	14 6	1 9 0
12	22	15 0	16 10 0
3	6	16 0	4 16 0
2	4	17 0	3 8 0
4	8	17 6	7 0 0
8	19	20 0	19 0 0
1	2	22 0	2 4 0
2	6	22 6	6 15 0
1	6	23 4	7 0 0
1	4	25 0	5 0 0
15	34	30 0	51 0 0
5	9	35 0	15 15 0
126	280		£193 9 6

Applications are made either through the Infant Welfare Centres or direct to the Secretary of the Home Helps Society. All applications are investigated by officers of the Maternity and Child Welfare Department. If not suitable for a free Home Help, in accordance with a scale applicable to grants of milk under the Child Welfare Scheme, the information is passed on to the Secretary of the Society, who assesses payment.

Summary of Work of *Investigators for 1931.

). of visits in connection with Milk Investigations ..	New cases ..	89	233
	Reinvestigations	144	
lk Investigations at Centres	New cases ..	4,072	16,935
	Reinvestigations	12,863	
). of visits in connection with Dinner Investigations :			
For Nursing and Expectant Mothers and Children	New cases ..	5	43
	Reinvestigations	38	
). of dinner investigations at Centres	New cases ..	89	118
	Reinvestigations	29	
). of visits in connection with Medical Fees	New cases ..	1,788	2,468
	Reinvestigations	648	
. of medical fee investigations at Centres	New cases ..	28	
	Reinvestigations	4	
vestigation visits *re* Home Helps	New cases ..	46	182
vestigation at Centre *re* Home Helps	New cases ..	136	
vestigation visits *re* Maternity Beds	New cases ..	66	204
vestigation at Centres *re* Maternity Beds	New cases ..	138	
	Total		20,183

tre Work :	Milk Clerk's duties	45 days
	Office Work—Clerical duties ..	110½ ,,
	Total	155½ ,,

These officers make enquiries into the financial resources and general conditions of the families to whom help has been given under the Maternity and Child Welfare Acts and Regulations.

INFANT LIFE PROTECTION.

Children Act, 1908.

Children Nursed for Hire or Reward during the Year.

Number of foster-mothers on the register at the beginning of the year		244
Number of foster-mothers on the register at the end of the year		214
Number of children on the register at the beginning of the year	232	
,, ,, placed on the register during the year	184	
		416
,, ,, who ceased, during the year, to come under the provisions of this Act		193
,, ,, remaining on the books at the end of the year		223

Details as to Number of Children who ceased, during the Year, to come under the Provisions of the Children Act, 1908.

Returned to parents or relatives	114
Attained the age of 7 years	26
Adopted without payment	16
Sent to special homes, etc.	5
Admitted to hospitals	20 (4 died)
Removed to other districts	9
Deaths	3
Total	193

Licences Granted.

Licence for one child	54
,, two children	10
,, three months	3
Total	67
Licences refused	11
Cautioned	8
Withdrawals	1

Adoptions.

By foster-mothers	12
Other persons	4
Total	16

The majority of the nurse-children are illegitimate. Of the 184 new cases taken on the books in the last twelve months, only 21 were legitimate.

The number of visits paid by the Infant Life Protection Visitor to nurse-children during the year was 706, visits paid by Health Visitors 2,001.

During the year 27 children were removed, 7 by the Committee on account of the homes being unsatisfactory, and 20 by their mothers to other foster-mothers.

There have been 3 deaths amongst these children during the year, one girl aged 6 years died from pneumonia, one girl aged 1 year 3 months died from pneumonia and convulsions, and the third, a boy aged 5 months, died from pneumonia and convulsions.

Three children were deserted by their mothers and were admitted to the City Hospitals, two went to Booth Hall Infirmary where one died, the other child was reclaimed after six days, the third was admitted to Withington Nursery, where she is still chargeable.

The majority of foster-mothers in Manchester undertake the care of a child for 12s. 6d. a week, a few charge 15s., a small proportion 10s., and a very small number between 5s. and 10s. a week.

Municipal Foster-Mothers.

In 1919 the Committee accepted the endowment of the Cheetham Institute for children deprived of the care of one or both of their parents, and in return undertook to provide foster-mothers for such children.

The foster-mothers receive £1 weekly for each child, for this they undertake to clothe, feed, and care for the child. It is also a condition that the foster-children should be taken regularly to infant welfare centres.

At the beginning of the year there were nine municipal foster-mothers, and seven at the end of the year. There has been a weekly average of 10 children nursed by municipal foster-mothers.

The grant has been chiefly spent in maintaining children of ill mothers or of widowers who could not make any suitable arrangements for the care of their child. The period of help given to each child varies, but no child is helped after the age of 5 years. Usually permanent suitable arrangements are made before the child attains the age of 5 years.

STATEMENT OF WORK DONE BY THE HEALTH VISITORS.

The staff at the end of the year 1931 consisted of a Superintendent, an Assistant Superintendent, 59 Health Visitors, a Cleansing Nurse, and eight Female Clerks.

Table 1 shows the work done throughout the year in each district worked by the Health Visitors.

Table 2 compares the work of 1931 with that of the four preceding years.

Notification of Births Act.

The total number of notifications received in 1931 under the Notification of Births Act was 13,480, of which 7,264 were from doctors, 6,145 from midwives, and 71 from parents. 12,779 notifications referred to live births, and 701 to still-births.

In the preceding year 14,310 notifications were received.

The total registered births for the City during 1931 numbered 12,878, of which 12,250 were live births and 628 still-births.

The actual number of new live births allocated to the Health Visitors for visiting during the year was 11,931, or 97·3 per cent. of the total live registered births. The still-births, as stated elsewhere, were specially investigated.

In addition to the above, in 1931 the Health Visitors "found" on their respective districts 239 children who were born during the current year, 250 who were born during 1930, 204 born during 1929, 144 born during 1928, and 58 born during 1927, thus adding a total of 895 new cases to be visited, to those already distributed to them through the Notification of Births Act.

These cases were chiefly removals into Manchester from other towns.

Deaths.

Under One year.

1,024 deaths of infants under one year of age were investigated during 1931. Of these, 126 lived less than a day, 148 died over a day old and within a week, 134 died over a week old and within a month, 211 died over a month and under three months old,163 over three months and under six months old, 130 over six months and under nine months old, and the remaining 112 between the ages of nine months and one year. (See details in Table 3.)

One to Two Years.

There were 279 deaths of children in this group during 1931 in the City.

Two to Five Years.

Amongst these 221 deaths occurred ; 105 in the third year, 74 in the fourth year, 42 in the fifth year.

The deaths occurring in children between the ages of 1 to 2 years, and of 2 to 5 years are given in Tables 4 and 4a respectively, classified in the City wards and in the principal causes of death.

Still-births.

The Health Visitors investigated 368 still-births occurring in medical practice, or in the various City hospitals. Those occurring in the practice of a midwife are dealt with by the Inspector of Midwives (see page 160).

Ante-natal Care.

During the year, in the course of their routine visits, the Health Visitors saw and advised 1,471 expectant mothers.

In addition, 718 special visits were paid at the end of a period of six months to homes where a still-birth or neo-natal death had occurred, with a view to ascertaining whether help was needed in a further pregnancy, and as the result of these visits approximately 200 expectant mothers were brought to our notice. These ante-natal cases were revisited regularly at intervals of one month, and the Health Visitors paid 476 visits to these mothers, many of whom also attended the Corporation Ante-natal Clinics, held at the Infant Welfare Centres and at Withington and Crumpsall Hospitals.

Summer Diarrhœa.

From July 15th to September 30th, 1931, 69 cases of summer diarrhœa were visited. Of these, 15 occurred during the last two weeks in July, 36 during the month of August, and 18 during the month of September. These figures are much lower than those for the preceding year, when 149 cases were visited.

The details and distribution of these cases are shown.

TABLE 5.—SUMMER DIARRHŒA. CASES VISITED BY THE HEALTH VISITORS IN 1930 (CHILDREN UNDER 5 YEARS), COMPARED WITH THOSE VISITED DURING THE FOUR PRECEDING YEARS, 1927, 1928, 1929, and 1930.

	Year				
	1927	1928	1929	1930	1931
Total number of cases visited	194	196	183	149	69
Number of cases occurring in—					
July (15th–31st)	30	52	48	33	15
August	86	69	61	39	36
September	78	75	74	77	18
Cases in Wards.					
All Saints	6	8	8	5	..
Ardwick	12	7	6	12	8
Beswick	13	15	10	7	4
Blackley	1	1	2	1	1
Bradford	6	9	11	14	5
Collyhurst	7	10	10	16	2
Cheetham	..	..	..	..	1
Gorton North	6	2	..	7	4
Gorton South	8	10	4	8	2
Harpurhey	5	8	7	3	..
Levenshulme	8	3	3	..	1
Longsight	..	..	1	1	..
Medlock Street	14	14	18	16	8
Miles Platting	3	6	8	7	3
Moston	8	2	5	0	..
Moss Side East	5	5	..	3	..
Moss Side West	5	7	4	2	..
New Cross	19	19	13	6	3
Newton Heath	1	2	6	3	2
Openshaw	1	..	3	2	3
Rusholme	11	12	15	2	4
St. Clement's	2	4	4	7	2
St. George's	14	20	16	6	7
St. John's	12	10	10	1	..
St. Luke's	5	1	4	3	1
St. Mark's	6	2	4	..	2
St. Michael's	6	11	7	9	3
Withington, Didsbury, and Chorlton-cum-Hardy	2	1	2	6	3
Number affected under 1 year of age	112	104	102	79	43
Method of feeding at onset of illness—					
Breast	32	19	17	22	12
Mixed	14	13	14	9	5
Hand	66	72	71	48	26
Deaths—					
Total number	38	31	32	29	18
Number under 1 year of age	33	27	25	22	18
Number under 4 months of age	18	17	12	11	11

Cases Treated in the Manchester Babies' Hospital.

Recommendations for admission to the beds retained by the Corporation at the Babies' Hospital are practically all received, as will be seen from the following tables, from the Medical Officers of the Infant Welfare Centres.

The 20 Corporation cots for children under one year, and the ten beds reserved for cases of rickets, have been continuously occupied throughout the year, and there has always been a waiting list, particularly for the "rickets" beds.

Children under One Year.

During 1931, 136 recommendations were received for admission to the Corporation cots reserved for children under one year. Of these 28 were cancelled for the following various reasons:—Two were admitted into private cots, eleven were admitted to other hospitals, one died before a cot was available, ten so much improved whilst on the waiting list that hospital treatment was no longer necessary, in three instances the parents eventually refused to allow their child to go into hospital, and 1 child was in the care of a specialist at home when sent for.

The remaining 108 children admitted were recommended from the following Child Welfare Centres:—

Rosamond Street West, Chorlton-upon-Medlock	10
Hyde Road, West Gorton	1
Higher Ardwick	28
Hamilton Street, Collyhurst	9
Pollard Street, Ancoats	20
Manipur Street, Openshaw	7
Cheetham Hill Road, Cheetham	1
Oldham Road, Newton	2
Lower Moss Lane, Hulme	4
Clayton Street, Clayton	3
Jubilee Schools, Conran Street, Harpurhey	2
Platt Parish Hall, Wilmslow Road, Rusholme	9
Elm Street Schools, Miles Platting	4
Baptist Schools, Wilbraham Road, Chorlton-cum-Hardy	1
St. Peter's Schools, Barlow Road, Levenshulme	1
Community Hall, Hart Road, Wilbraham Estate	1
St. George's Schools, Abbey Hey Lane, Gorton	1
Public Health Office	4
Total	108

The various conditions from which the children were notified to be suffering were :—

Congenital Heart	1	Pylorospasm	1
Malnutrition	13	Adenitis	1
Atrophy	15	Bronchitis	7
Dyspepsia	29	Marasmus	5
Rickets	9	Eczema	1
Gastro-Enteritis	2	Anæmia	3
Vomiting	3	Prematurity	6
Abscess	1	Debility	4
Stomatitis	1	Meningitis	1
Pneumonia	2	Gastritis	3
		Total	108

The ages of the infants on admission were :—

Under 1 month	3	Aged 7 months	4
Aged 1 „	9	„ 8 „	3
„ 2 months	10	„ 9 „	7
„ 3 „	13	„ 10 „	5
„ 4 „	9	„ 11 „	5
„ 5 „	6	„ 12 „	8
„ 6 „	9	Over 12 „	*17
		Total	108

The length of stay in hospital varied from one week to 30 weeks. The average was about eight weeks.

* These children, being greatly underweight and undersized, were admitted as urgent "cot" cases.

Nine of the children died in hospital, and seven have died since discharge. Of these deaths two were due to broncho-pneumonia, two to tuberculosis, two to gastro-enteritis, and one to marasmus. Of the remainder, 87 children have been kept under regular supervision by the Health Visitor, one child has been admitted to the Withington Nursery, and three children have removed from Manchester. Twenty of these children may be said to be in a healthy condition, 45 are making progress, and 22 still need careful supervision. About 73 per cent. of the mothers attended the Infant Welfare Centre regularly, after receiving their infants home again from hospital.

Treatment of "Rickets" Cases.

Eighty-five recommendations were received for admission to the "Rickets" beds during the year, and 54 children were admitted.

For the various following reasons the other 26 recommendations were cancelled :—Six children were admitted to other hospitals, eleven children were not admitted because of improved conditions, in five instances the parents refused to allow the children to go into hospital, two children were admitted to private beds as urgency cases, and two cases had removed from Manchester during the waiting period.

The 54 children admitted were recommended from the following Child Welfare Centres :—

St. George's Schools, Abbey Hey Lane, Gorton	1
Rosamond Street West, Chorlton-upon-Medlock	7
Manipur Street, Openshaw	2
Hyde Road, West Gorton	4
Hamilton Street, Collyhurst	6
Higher Ardwick	7
Pollard Street, Ancoats	9
Elm Street, Miles Platting	2
Lower Moss Lane, Hulme	2
Clayton Street, Clayton	2
Platt Parish Hall, Wilmslow Road, Rusholme	5
Baptist Schools, Wilbraham Road, Chorlton-cum-Hardy	2
Oldham Road, Newton Heath	2
Heaton Road, Withington	1
United Methodist School, Market Street, Blackley	1
Public Health Office	1
Total	54

The ages of the children on admission were :—

Aged 1 to 2 years	33 children.
„ 2 to 3 „	19 „
„ 3 to 4 „	2 „
Total	54

The length of stay in hospital varied from one day to 20 weeks.

Of the 54 children admitted 53 have been discharged. An analysis of the latest reports on these discharged cases is as follows :—

12 children appear to have made a complete recovery and are stated to be in a satisfactory condition.

29 children who cannot be described as quite satisfactory continue to make good progress.

8 children still require supervision.

4 children have died.

Three of these deaths occurred during the measles epidemic and were due to measles and pneumonia, and the fourth death was due to whooping cough and tubercular peritonitis.

Seventy-one per cent. of the children have attended a centre since discharge from hospital, as compared with 91 per cent. for the previous year.

One child is still in hospital.

The continuance of the progress made in hospital both by the cot cases and the older children, depends very largely on the response made by the parents to the advice given to them at the hospital, at the welfare centres, or by the health visitors. It is to be regretted that even in some of the more serious cases the parents fail to realise the necessity of the continuance of medical supervision, and revert to their former unsatisfactory methods of child management.

In addition to the hospital authorities' own arrangements for keeping in touch with discharged children, reports are made by the health visitors in May and November each year, on children who have occupied "Corporation" cots. These are submitted to the hospital.

Cases Treated in the "Babies' Ward" at Monsall Hospital.

This ward, which consists of eight beds, is kept for the reception of children suffering from rickets and malnutrition.

During 1931 15 recommendations for admission to the Babies' Ward were received, and 13 children were admitted. Two recommendations were cancelled, one child having removed from Manchester, and the other, the parents refused to allow to go to hospital.

The 13 children admitted were attending the following Child Welfare Centres :—

Elm Street Schools, Miles Platting	1
Manipur Street, Openshaw	1
Pollard Street, Ancoats	2
Lower Moss Lane, Hulme	5
Jubilee Schools, Conran Street, Harpurhey	1
Hamilton Street, Collyhurst	2
Oldham Road, Newton Heath	1
Total	13

Ten of these children were admitted suffering from rickets, one from debility, one from atrophy and malnutrition, and one from chronic enteritis.

The length of stay in hospital varied from seven weeks to 26 weeks. (See also page 125 of Monsall Hospital report.)

The ages of the children on admission were :—

Aged 1 year	1	Aged 2 to 3 years	6
„ 1 to 2 years	3	„ 4 to 5 „	1
„ 2 years	2		
Total	13		

Twelve children have been discharged ; five are reported as quite satisfactory ; five children continue to improve ; and one child still requires supervision. Two children are still in hospital.

Only 25 per cent. of these children attended an infant welfare centre after their discharge.

Measles, German Measles, Whooping Cough, Pneumonia, and Influenza.

Measles.

The visitation of measles cases has been carried out without a break since the original Order of the Local Government Board, which came into force in January, 1916, and the work done under this Order by the health visitors, who are fully trained nurses, is most valuable.

The main reason for this work being undertaken by the health visitors is the protection of children under five years of age ; and where there are young children in houses affected by measles the health visitors' first care is to see that the best possible provision for isolation is made, in the endeavour to prevent the spread of infection to these younger members of the family.

As will be seen from the tables below, the notifications are received from four principal sources : the doctors, the school authorities, the parents, and those found by the health visitors.

When a doctor is already in attendance it only remains for the health visitors to give instructions regarding the public health side of the case : for example, the source of infection, isolation, school exemption, and ultimately the domiciliary disinfection requisite after the occurrence of a case of measles. As, however, the preponderance of measles cases occurs among the poorer members of the population, particularly during epidemic periods, the health visitors are frequently called upon by the mothers for the advice and help, which in richer homes is given by the trained private nurse. It also frequently

happens in the poorer districts that the doctor (having paid his primary visit) trusts to the parents to call him in again should any complication arise. Unfortunately the parents do not readily recognise the early symptoms of abnormal conditions, and it is frequently due to the supervision of the health visitors that the doctor has been recalled in time to prevent complications from becoming serious and even fatal. Further, parents having obtained medical attention in the primary case, which is often a mild one, are inclined to consider this unnecessary in subsequent cases, though these are generally the younger members for whom medical supervision is all important, and it is the health visitors in the course of their revisits who come across such cases and see that the necessary medical attention is obtained.

Arrangements of long standing exist between this department and the Manchester and Salford District Nursing Association for the nursing of cases of measles at home where necessary, and as also will be seen from the tables below, accommodation was provided in hospital for the reception of measles cases where home conditions were unfavourable. The majority of the cases were removed to Monsall Hospital, but a certain number were admitted to Booth Hall.

Whooping Cough.

Whooping cough, as will be seen from the report given below, is not a compulsory notifiable disease, but the cases which are brought to our notice are visited with the same care and forethought for the "under fives" as are measles cases.

Assistance.

The grant (originally made in 1917) to supply milk to young children suffering from measles, whooping cough, pneumonia, etc., in families where the actual income was below the standard scale, was continued during the year. Applications for milk were granted in 372 cases, and 5,635 pints of milk were given.

Measles.

Cases notified by doctors	5,986
Cases found by health visitors or notified by others than doctors	1,785
Total number of known cases	7,771
Total number of cases investigated	7,771

An analysis of the 7,771 investigated cases is given below :—

	Nursed at Home 7,452		Removed to Hospitals 279		* Developed Measles whilst in Hospitals 40		Total Cases Investigated
	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	
mber of cases ..	7,349	103	198	81	23	17	7,771
covered ..	7,338	73	196	49	21	4	7,681
d	11	30	2	32	2	13	90
e fatality.	149%	29·12%	1·01%	39·506%	8·69%	76·47%	1·15%

* Patients in hospital for other conditions developing measles.

In addition to the above, 68 cases of measles, classified as "late" cases, were found after complete recovery had been made.

The health visitors paid 16,921 visits in connection with the above measles cases during 1931.

German Measles.

Total number of German measles cases notified	2,553
,, ,, ,, ,, visited	2,553
,, ,, ,, ,, recovered	2,552
,, ,, ,, ,, died	1
The number of visits paid by the health visitors in respect of German measles was	6,111

Whooping Cough

Whooping cough, a disease which is not compulsorily notifiable by the medical profession, has since 1911 been included in a local act as one of three infectious diseases in which parents and guardians of school children must notify the head teacher of any child known or suspected to be suffering from this disease.

The information is passed on to the Medical Officer of Health by the Education Department.

Total number of cases notified	3,151
Total number of cases visited..	3,151

An analysis of the 3,151 investigated cases is shown below :—

	Nursed at Home 2,990		Removed to Hospitals 154		* Developed Whooping Cough whilst in Hospitals 7		Total Cases Investigated
	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	
Number of cases ..	2,883	107	92	62	3	4	3,151
Recovered ..	2,864	61	81	33	3	4	3,046
Died	19	46	11	29	..	..	195
Case fatality.	65%	42·99%	11·95%	46·77%	..	..	3·33%

* Patients in hospital for other conditions developing whooping cough.

As in the case of measles, in addition to the above, 478 cases of whooping cough were found after complete recovery had been made, and have been classified as "late" cases.

The health visitors paid 8,742 visits to whooping cough cases during 1931.

The distribution of measles, German measles, and whooping cough throughout the City during 1931, and the mortality therefrom, together with a report showing how the various age-groups have been effected by measles are to be found elsewhere. (See pages 43 to 47.)

A full report of the work with regard to pneumonia during 1931 appears on page 49, and of influenza on page 51.

Verminous Work.

With one or two exceptions, all the notifications in respect of vermin were sent in from the Education Department.

During 1931, 379 notifications were received, as compared with 584 in the previous year. This considerable decrease is probably due to the fact that the school nurses are now dealing directly with the slightly verminous cases; only the persistently verminous ones, and those which would suggest that the home conditions required supervision, being referred to us.

The cleansing station at Oldham Road was in use for the compulsory cleansing of 10 school children and of 36 voluntary cases on 11 days throughout the year. Formerly all school children requiring compulsory cleansing were referred to this department, and they were cleansed by the special nurse appointed for verminous work. These cleansings are now mostly carried out by the school nurses at various centres in the City.

In addition to her work at the cleansing station, the special nurse carried out in the home the cleansing of 66 persons, all suffering from a serious verminous condition of the head. This assistance was rendered where there was no responsible person in the home to undertake the duty. Nurse also paid 568 other visits to verminous cases.

Scabies Work.

Here again our original source of information was the Education Department, who sent to us 715 notifications in respect of scabies amongst school children during 1931, as compared with 646 in the preceding year, but many additional cases were brought to our notice as contacts of those notified.

It has been found necessary to make provision for the treatment of some adult cases at the cleansing station, which was in use for this purpose on 122 days. The average number of treatments per person is three, and altogether 373 treatments have been given.

To show the increase in the work, it is interesting to compare the figures with those for 1930 and 1929, when 298 and 46 treatments were given respectively.

N.S.P.C.C.

The National Society for the Prevention of Cruelty to Children has been most helpful to us in our work.

Twenty-one cases were referred to this Society during the course of the year, the majority being those cases in which immediate medical supervision was necessary but was not being obtained, despite the repeated advice given by the health visitors. The Society, at our request, has sent its officers to our assistance, and the difficulties have been overcome without resorting to prosecution.

Visiting the Jewish Poor.

A summary of the work done by the health visitor appointed by the Ladies' Society for Visiting the Jewish Poor, which is subject to the supervision of the Medical Officer of Health, is given in the following tables:—

Work of the Health Visitor during the Year 1931.

DISTRICT	House-to-house Inspections		Re-inspections			Primary Infants	Subsequent Visits	Children from 1 to 5 years	Expectant Mothers		Neo.-Natal Revisits	Total Number of Visits
	Number of Visits	No. of defects referred to Sanitary Dept.	Number of Visits	Defects Remedied	New Complaints Referred				P.	S.		
Red Bank and Strangeways	418	59	79	63	64	209	2001	2081	141	5	3	4937

Table 2.

Showing the Work done by the Health Visitors during the Year 1931 and comparing it with the Work done during the Four Preceding Years.

Classification of Visits	1927	1928	1929	1930	1931
Primary visits to Infants	12,067	11,879	12,194	13,780	12,665
Subsequent visits to Infants	64,239	60,011	59,612	63,364	58,971
Subsequent visits to Children over 1 year of age and under 5 years	162,357	148,993	137,981	148,524	135,193
Other visits *re* Infants and Young Children, etc.	334	300	438	113	111
Special visits *re* Sanitary Defects ..	870	694	481	266	113
Special Investigations	....	757	22	15	54
Primary visits to Verminous Cases (including Scabies)	612	600	558	790	647
Subsequent visits to Verminous Cases	1,976	2,031	1,468	2,055	1,568
Measles Investigations	12,951	6,975	9,034	11,252	7,682
Subsequent visits	16,456	16,324	13,101	21,380	9,239
German Measles Investigations ..	378	1,341	493	259	2,550
Subsequent visits	559	1,859	676	377	3,561
Whooping Cough Investigations ..	2,204	3,134	3,969	1,422	3,038
Subsequent visits	4,579	5,767	8,449	2,712	5,704
Visits *re* Relief	101	76	87	49	29
Visits *re* Influenza	2,196	534	3,103	433	1,489
Visits *re* Pneumonia	8,814	7,930	9,998	6,856	7,373
Unsuccessful visits	1,907	2,339	1,748	2,419	2,312
Still-Birth Investigations	68	554	606	803	380
Other Ante-Natal visits	....	142	2,383	2,554	2,671
Total visits	292,668	272,240	266,401	279,423	255,350
Number of Health Visitors	55	55	57	58 (1 part time at centres)	59 (1 part-time at centres)
Number of Health Visitors dealing only with Measles, Whooping Cough, and Pneumonia Cases	4	4	4	4	4
Number of Districts worked	51 (1 temporary Measles Visitor also worked for one month)	51	53	54 (2 temporary Measles Visitors—1 worked 6 weeks and 1 worked 16 weeks	55
Attendance at Child Welfare Centres	....	1,969	2,667	3,190	3,694

TABLE 1.—HEALTH VISITORS' YEARLY SUMMARY—TOTALS FOR THE FIFTY-TWO WEEKS ENDING, JANUARY 2nd 1932.

DISTRICTS	No. of Births	INFANT WORK							ANTI-NATAL CARE				OVERCROWDING AND SANITARY DEFECTS					SCABIES		VERMINOUS WORK		MEASLES WORK				WHOOPING COUGH		PNEUMONIA		INFLUENZA		MISCELLANEOUS VISITS								REMARKS
									Still Births		Neo-Natal Deaths" Revisits	Expectant Mothers										Measles		German Measles										Wrong Addresses						
		Primary Visits	Subsequent Visits	Children 1 to 2 years	Children 2 to 3 years	Children 3 to 4 years	Children 4 to 5 years	Investigations re Deaths of Children under 5 years from Diarrhœa	Primary Visits	Subsequent Visits		Primary Visits	Subsequent Visits	Overcrowdings	Overcrowdings Abated	Defects Found	Defects Remedied	Special Visits to either	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Visits re Infantile Diarrhœa	Visits re Relief	Visits re "Out"	Infants	Infectious Diseases	Special Visits	No. of Sessions at Centres	TOTAL VISITS	
All Saints—North	..	49	403	285	248	237	189	..	2	1	1	14	8	..	..	(8)	(10)	..	4	8	..	3	4	7	..	1	..	1	12	39	2	1	..	..	..	..	..	..	(13)	1,519	After 11-4-31 merged into Medlock Street East and South-East.
,, —South	271	308	1,470	894	701	617	524	1	8	10	8	70	3	..	..	(16)	..	3	27	13	8	4	120	110	36	49	30	27	35	52	16	7	..	..	..	..	..	..	(54)	5,294	
Ardwick—North	200	101	1,110	965	748	655	586	7	9	12	2	31	4	..	..	(8)	..	..	8	23	4	9	101	82	54	85	71	147	36	87	24	40	..	..	..	1	..	1	(64)	5,393	
,, —South	202	261	1,096	677	627	413	520	8	5	8	3	54	11	..	..	(1)	..	..	10	12	1	2	10	19	37	67	29	54	18	31	11	8	..	..	..	1	..	..	(4)	3,033	
,, —East	168	225	867	683	506	500	737	3	4	12	..	50	59	..	..	(5)	..	..	17	37	4	14	54	92	71	257	50	266	31	83	12	11	(1)	..	..	12	1	..	(80)	1,802	
Blackley	231	241	371	370	234	237	383	..	7	4	5	36	1	..	..	..	..	..	1	1	64	62	1	6	13	33	18	37	23	15	..	..	..	..	..	1	1	..	(41)	2,180	
Bradford—East	134	141	701	507	302	410	471	3	6	10	3	42	28	..	..	(35)	(8)	..	4	11	1	4	64	102	26	36	24	77	17	41	9	9	(1)	..	..	2	4	..	(73)	3,151	
,, —West	160	170	1,264	717	529	308	310	1	5	7	10	50	32	(1)	..	(16)	(22)	29	3	5	5	9	112	221	10	16	7	22	26	34	5	5	..	..	..	8	..	..	(66)	4,060	
Beswick—North	182	187	1,027	695	642	604	623	1	3	4	7	29	5	(1)	..	(43)	(19)	11	2	13	8	40	139	227	18	30	38	107	22	49	18	8	(5)	..	..	..	1	..	(75)	4,558	
,, —South	151	124	693	465	499	480	441	1	4	5	2	21	3	(1)	(1)	(7)	..	1	15	23	..	7	32	63	31	66	19	37	9	18	..	3	..	..	2	1	..	(36)	3,065	
Collyhurst—North	214	174	1,197	587	540	500	539	2	3	5	7	17	10	(3)	(2)	(31)	(10)	2	4	17	11	45	134	286	3	3	34	85	18	61	31	37	(3)	..	..	5	1	..	(90)	4,304	
,, —South	249	247	889	649	572	407	539	1	4	2	6	33	10	(1)	..	(9)	..	..	8	13	23	47	125	228	1	3	15	52	18	51	3	5	..	..	..	..	..	..	(81)	4,011	
,, —Central	..	34	329	182	190	222	104	1	..	1	..	6	1	..	..	(9)	(1)	..	5	18	4	5	2	4	..	1	2	9	11	45	..	8	..	..	..	2	1	..	(13)	1,187	After 11-4-31 merged into Collyhurst North and South.
Crumpsall	332	541	1,233	409	270	202	239	1	8	14	15	37	14	..	..	(5)	..	..	1	..	..	10	84	88	3	7	37	88	36	87	15	7	..	..	..	..	..	..	(71)	3,446	Cheetham visits included up to 11-4-31.
Gorton—N.E.	101	126	480	940	584	504	400	..	1	2	1	..	..	..	..	(8)	(6)	1	1	3	1	3	36	62	38	57	15	36	6	5	..	..	..	..	..	..	..	..	(48)	3,002	
,, —N.W.	179	187	1,428	945	762	696	552	1	5	6	..	36	19	..	..	(10)	(9)	2	3	8	4	14	145	172	69	126	72	173	32	90	29	15	(5)	4	..	11	2	..	(77)	5,638	
,, —S.E.	202	172	958	450	387	378	525	1	2	8	9	1	5	(3)	..	(12)	..	..	3	7	5	39	15	44	19	50	14	59	17	56	8	12	..	..	..	..	..	..	(51)	2,044	
,, —S.W.	201	207	1,073	1,187	811	688	301	..	11	10	2	60	12	..	..	(3)	..	..	12	14	11	17	63	85	62	210	76	182	29	94	51	23	..	..	..	..	..	..	(50)	5,261	
Harpurhey—North	156	176	859	935	524	461	536	1	4	7	11	23	5	..	..	(10)	..	..	9	18	10	57	137	295	1	1	21	60	9	57	10	14	..	..	..	..	..	..	(108)	3,041	
,, —South	180	168	713	479	390	312	322	..	3	17	5	45	..	(1)	..	(8)	..	..	2	7	4	27	66	89	1	4	5	11	13	18	12	15	..	8	..	4	..	..	(61)	2,740	
Levenshulme	223	258	800	359	379	339	605	2	9	14	2	23	13	..	..	(6)	(10)	6	6	8	..	1	37	59	17	21	111	221	25	48	17	13	..	..	..	12	2	..	(80)	3,494	
Longsight	254	260	1,095	775	664	539	736	1	5	5	9	2	1	..	..	..	..	..	8	3	1	..	99	145	66	111	79	168	31	47	11	3	..	..	..	..	..	..	(74)	4,502	
Medlock Street—East	294	270	1,103	709	550	600	796	3	10	11	13	105	..	..	..	(32)	(35)	..	10	16	3	10	130	196	59	71	27	53	39	91	11	13	(1)	..	..	..	..	..	(68)	4,095	Includes part of All Saints' North from 13-4-31.
,, ,, —South	225	239	1,091	729	658	562	492	0	7	5	6	19	1	..	..	(2)	..	..	17	18	4	7	95	136	30	49	30	41	24	39	10	2	..	..	..	..	..	..	(74)	4,308	
,, ,, —S.E.	220	225	1,082	877	657	570	677	3	11	14	10	39	10	..	..	(13)	(9)	19	13	35	6	18	46	97	38	98	27	121	22	83	1	4	..	..	..	6	..	..	(57)	4,809	Includes part of All Saints' North from 13-4-31.
Miles Platting—N.	148	158	1,315	828	694	674	509	..	5	5	6	36	12	..	..	(45)	(1)	..	11	14	2	3	214	263	9	13	47	84	43	96	14	16	..	..	..	..	..	..	(55)	5,071	
,, —East	157	107	796	530	470	401	385	1	1	8	3	34	2	..	..	(2)	(6)	7	5	5	..	9	70	60	2	6	11	15	22	49	9	9	..	..	..	..	..	..	(32)	3,023	
,, —West	170	185	1,178	1,083	948	827	660	4	8	11	..	12	1	..	..	(2)	..	..	3	8	3	16	175	183	2	4	45	44	39	83	2	3	..	..	..	..	1	..	(61)	5,528	
Moss Side—East	332	394	1,132	721	560	447	500	1	14	12	3	10	1	..	..	(6)	(1)	..	13	26	8	8	93	97	19	52	53	117	12	21	12	12	..	..	..	27	2	2	(59)	4,405	
,, —West	290	317	1,064	702	525	557	617	1	11	15	9	..	1	..	..	..	..	..	8	15	1	2	73	200	43	41	68	169	23	29	19	4	..	..	..	..	..	..	(51)	4,514	
Moston	305	323	1,360	947	989	941	975	..	5	6	8	22	5	..	..	..	..	..	5	7	1	5	113	130	13	50	28	73	37	75	9	13	..	..	..	1	..	..	(92)	6,141	
New Cross—Central	192	103	1,425	891	619	403	542	2	8	3	7	45	33	..	..	(7)	(5)	..	10	44	5	15	128	195	5	10	44	94	55	127	31	16	(2)	..	..	7	..	2	(55)	5,055	
,, —South	192	185	1,221	740	644	558	471	3	7	7	6	40	6	..	..	(9)	(1)	7	3	14	1	21	50	65	10	12	29	69	39	123	8	14	..	..	..	..	2	(61)	4,355	
,, —West	212	235	1,489	1,415	992	758	650	13	10	8	..	35	58	(4)	(4)	(16)	(2)	..	7	29	10	9	132	186	5	2	8	22	33	182	..	..	(1)	..	..	..	..	..	(75)	6,288	
Newton—North	162	146	1,144	562	420	402	375	..	8	5	3	10	10	..	..	(7)	(2)	..	7	9	1	3	58	61	15	4	11	22	42	131	4	4	..	..	..	..	..	..	(64)	3,457	
,, —South	148	107	545	515	489	410	540	..	6	4	4	37	24	(1)	..	(2)	..	..	9	23	2	7	31	62	16	25	34	108	35	72	24	20	..	..	..	..	2	..	(91)	3,217	
Openshaw	248	262	1,094	654	584	508	700	4	9	12	5	..	2	..	..	..	..	..	10	10	1	4	116	198	47	73	56	128	35	44	6	3	..	..	..	..	3	1	80	4,575	
Rusholme	208	293	1,200	582	524	443	494	..	6	11	5	7	..	..	..	(25)	(37)	14	3	9	3	33	115	143	37	44	60	123	25	36	84	22	(12)	2	..	..	..	17	72	4,245	
St. Clement's	141	149	1,002	702	555	512	649	..	2	7	0	3	2	..	..	(3)	(3)	..	4	6	8	8	50	63	21	29	11	44	31	110	3	9	(1)	3	..	..	2	2	(61)	3,993	
St. George's—East	202	234	1,076	858	716	653	785	5	4	3	5	41	22	..	..	..	..	..	14	23	10	24	77	174	42	60	44	114	22	62	2	5	(7)	..	..	..	..	..	(45)	5,075	
,, —West	209	265	1,386	1,064	976	1,035	768	2	5	2	8	3	..	..	..	(5)	..	..	7	18	5	17	92	158	32	83	48	108	25	68	12	11	..	..	..	..	..	..	(56)	6,168	
St. John's	207	270	1,174	552	606	543	480	4	8	9	4	13	10	..	..	(29)	(9)	..	10	18	11	16	40	46	30	57	24	34	46	88	4	..	..	..	..	..	..	..	(62)	5,308	
St. Luke's—North	205	211	1,214	1,027	814	782	811	..	7	3	8	1	2	..	..	(93)	..	1	13	18	11	72	82	154	33	50	32	82	28	63	7	11	(1)	4	..	6	1	..	(45)	4,337	
,, —South	301	314	1,209	734	588	536	591	3	5	9	1	13	..	(1)	..	(2)	..	..	10	18	11	16	40	46	30	57	24	34	46	88	4	..	..	..	..	..	..	..	(62)	5,308	
,, —West	171	177	1,100	764	842	730	776	1	2	2	6	1	4	..	..	(16)	(4)	1	5	16	9	26	45	69	142	241	95	255	36	101	13	17	(4)	..	..	3	1	3	(55)	5,483	
St. Mark's—North	194	199	1,110	809	735	592	549	1	6	5	2	50	..	..	(4)	(14)	(14)	6	1	..	7	25	18	35	57	114	81	152	19	28	2	7	..	..	..	42	4	..	(47)	4,050	
,, —South	227	240	1,064	1,365	1,055	770	475	2	5	10	..	..	1	..	..	..	..	..	5	11	..	4	167	226	4	3	26	58	20	57	2	5	..	..	..	..	..	..	(55)	6,181	
St. Michael's—East	193	204	1,446	1,022	881	886	758	6	14	8	13	76	12	..	..	(4)	(1)	..	3	10	5	13	178	375	..	4	35	74	43	107	8	13	..	..	..	1	2	..	(65)	6,257	
,, —West	213	231	718	461	431	386	508	..	7	16	2	28	4	(1)	..	(18)	..	..	5	10	2	16	124	125	27	28	32	74	15	47	5	5	..	..	..	4	..	..	(69)	3,311	
District I.	192	190	951	668	522	433	391	1	4	2	4	21	2	..	..	(1)	..	..	10	5	4	7	120	189	30	52	42	82	13	18	..	..	..	..	..	6	..	10	(126)	3,777	
,, II.	150	177	802	655	516	486	345	..	1	..	..	..	..	..	..	..	..	..	3	1	..	..	28	24	11	13	11	22	6	8	2	4	..	..	..	..	..	1	(113)	3,116	
Wilbraham Estate	235	279	593	572	548	376	508	..	6	6	11	8	..	..	..	..	..	..	1	2	..	..	78	149	43	47	74	215	17	39	3	7	..	..	..	1	..	..	(78)	3,583	
Withington—East	207	275	1,290	550	567	454	491	..	12	7	3	39	..	..	..	(5)	(1)	..	3	7	1	6	78	129	45	66	61	106	16	38	5	3	..	1	..	1	..	..	(73)	4,284	
,, —West	303	335	629	345	262	281	326	4	10	18	1	15	5	(2)	..	(1)	(2)	..	3	6	7	32	69	141	18	35	36	68	12	3	26	4	..	..	..	..	..	..	(102)	2,000	
,, —Central	158	320	655	396	338	220	247	1	5	6	..	26	..	..	..	..	..	..	2	5	..	3	90	111	6	18	03	88	7	9	2	1	..	..	..	4	..	..	(35)	2,024	Includes Wythenshawe from 1-4-31.
Barlow Moor Estate and Wythenshawe	98																																								
Cheetham	309	248	1,045	437	229	116	101	..	12	4	2	8	..	..	..	..	..	..	40	70	9	13	27	50	13	7	3	4	..	..	..	..	..	..	..	..	..	..	(48)	2,445	
Chorlton-cum-Hardy	219	172	301	86	82	44	83	..	1	1	..	3	..	..	..	(2)	..	..	31	10	2	2	26	6	7	3	..	..	..	..	..	..	..	..	..	..	..	..	(18)	860	
Temporary Health Visitors	..	27	127	92	75	65	125	..	..	1	..	..	..	..	..	..	..	..	47	75	2	6	..	5	2	3	..	..	..	..	..	..	..	..	8	..	..	..	(24)	660	
Measles I.	..	18	268	274	259	270	184	2	11	7	11	..	1	..	..	..	..	1	794	708	75	87	167	285	301	319	46	21	(1)	2	452	7	32	5	..	4,014					
,, II.	..	1	285	381	447	334	190	1	..	2	..	..	..	..	..	..	..	..	3	3	1	..	686	346	504	339	304	185	301	285	44	14	(1)	..	710	..	..	7	..	5,438	
,, III.	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	(1)	..	..	3	1	2	..	594	501	236	184	229	130	458	321	48	17	..	..	466	..	..	..	..	5,214	
,, IV.	..	13	321	295	298	314	391	..	..	..	..	..	..	..	..	..	..	..	6	6	1	3	975	501	236	184	229	130	458	321	48	17	..	..	..	..	..	..	..	5,214	
		27	190	238	224	250	193	1	7	3	2	..	1	..	..	(1)	..	2	3	2	1	2	459	434	219	183	109	171	370	279	97	15	..	1	371	..	9	2	(42)	3,931	
TOTALS	*11,753	*12,665	58,971	40,542	34,247	30,144	30,260	111	368	433	285	1,486	476	(20)	(11)	(013)	(228)	113	406	731	243	836	7,078	9,237	2,551	3,502	3,037	5,689	2,885	1,516	887	594	(40)	29	2,005	232	76	55	(3,095)	255,350	

* In addition there were 895 "Found Cases" to which "Primary" visits were paid. The bracketed figures are incidents, not actual visits.

Ward	Number of Health Visitors working in the District	Number of Deaths of Children under 1 year of age	Causes of Death—Children under 12 Months.													
			Bronchitis and Pneumonia	Prematurity	Debility and Marasmus	Dystocia	Enteritis	Convulsions	Tuberculosis	Syphilis	Accidental Deaths, including Want of Attention at Birth	Influenza	Measles	Whooping Cough	Other Causes
All Saints	1	37	5	12	1	..	4	3	2	1	..	..	..	..	9
Ardwick	3	67	23	10	1	2	17	..	1	2	..	2	..	1	8
Beswick	3	38	6	8	3	3	5	..	..	1	..	..	..	1	11
Blackley	1	18	5	5	1	1	1	1	..	..	..	..	..	1	3
Bradford	3	45	11	11	1	4	7	1	..	..	1	1	1	2	5
Cheetham	1	18	3	4	1	2	1	2	..	..	..	..	..	..	5
Chorlton-cum-Hardy	2	25	2	12	2	..	2	1	..	..	1	..	..	..	5
Collegiate	1	37	11	6	4	4	6	..	1	..	1	..	..	1	3
Collyhurst	2	57	18	7	5	..	9	2	..	..	..	2	1	..	13
Crumpsall	1	17	2	5	1	..	..	2	..	..	1	..	..	3	3
Didsbury	1	17	4	2	..	..	1	3	..	..	..	2	..	1	4
Gorton North	2	16	7	..	..	..	1	..	..	..	1	1	1	..	5
Gorton South	2	31	12	10	1	..	2	..	..	..	..	..	..	..	6
Harpurhey	2	28	7	9	2	1	2	1	..	..	..	..	1	2	3
Levenshulme	1	10	3	4	..	..	3	..	..	..	..	..	..	..	..
Longsight	1	15	2	4	1	1	2	..	1	..	..	..	..	..	4
Medlock Street ..	3	53	14	12	3	..	11	2	..	1	1	1	1	1	6
Miles Platting ..	3	43	11	6	2	2	6	..	2	..	1	..	4	4	5
Moston	1	28	7	6	2	1	..	1	..	..	2	..	..	..	9
Moss Side East ..	1	24	5	7	..	..	1	..	..	1	..	..	..	2	8
Moss Side West ..	1	21	6	6	2	..	1	2	..	..	..	..	..	..	4
New Cross	3	71	32	9	3	2	9	..	3	..	1	..	1	..	11
Newton Heath ..	2	23	4	8	2	..	..	..	..	..	1	..	..	3	5
Openshaw	1	27	12	2	..	..	7	..	..	..	..	..	..	..	6
Rusholme	1	16	4	4	..	..	1	1	..	..	..	..	..	..	6
St. Clement's	1	17	3	7	1	1	1	..	..	..	..	1	..	1	2
St. George's	2	48	7	15	1	2	10	2	..	..	2	1	..	1	7
St. John's	1	10	5	1	..	..	3	..	..	..	..	..	..	..	1
St. Luke's	2	45	10	10	3	1	6	2	2	2	1	1	..	..	7
St. Mark's	2	36	13	5	..	..	4	1	1	..	3	..	..	3	6
St. Michael's	2	41	11	6	2	1	9	..	1	..	..	..	..	1	10
Withington	2	39	7	8	2	..	2	1	..	..	1	..	..	..	18
Wythenshawe	1	6	1	2	..	1	..	..	..	..	..	..	..	..	2
Total	56	1,024	273	223	47	29	134	28	14	8	18	12	10	28	200

Deaths—One to Two Years—1931. Table 4.

Ward	Number of Health Visitors working in the District	Number of Deaths among Children 1 to 2 years of age	Causes of Death—Children One to Two Years.										
			Bronchitis and Pneumonia	Debility and Marasmus	Enteritis	Convulsions	Tuberculosis	Syphilis	Accidental Deaths	Influenza	Measles	Whooping Cough	Other Causes
All Saints	1	17	8	..	..	..	2	1	2	..	2	1	1
Ardwick	3	13	6	..	1	..	..	..	..	..	1	3	2
Beswick	3	17	7	..	1	1	..	..	..	..	4	2	2
Blackley	1	3	2	..	1	..	..	..	..	..	..	..	..
Bradford	3	13	7	..	..	..	1	..	..	..	3	..	2
Cheetham	1	6	4	..	..	..	1	..	..	..	..	..	1
Chorlton-cum-Hardy	2	3	3	..	..	..	..	..	..	..	..	..	..
Collegiate	1	5	1	..	..	..	1	..	..	..	..	..	3
Collyhurst	2	17	12	..	..	..	2	..	..	..	3	..	..
Crumpsall	1	5	4	..	..	..	..	..	..	..	..	..	1
Didsbury	1	6	1	..	1	..	..	..	..	..	1	2	1
Gorton North	2	6	3	..	..	..	..	..	1	..	1	..	1
Gorton South	2	5	4	..	..	..	..	..	..	..	..	1	..
Harpurhey	2	10	4	..	..	..	1	..	..	..	..	2	3
Levenshulme	1	3	1	..	..	..	1	..	..	..	..	1	..
Longsight	1	..	..	..	..	..	..	..	..	..	..	..	..
Medlock Street	3	21	5	..	3	..	3	..	1	..	1	6	2
Miles Platting	3	10	3	..	3	..	..	..	..	..	3	1	..
Moston	1	6	1	..	..	..	3	..	..	..	1	..	1
Moss Side East	1	5	3	..	..	..	1	..	..	..	1	..	..
Moss Side West	1	7	4	..	..	1	1	..	..	..	..	1	..
New Cross	3	22	12	..	1	..	1	..	..	..	3	3	2
Newton Heath	2	10	2	..	1	..	..	..	1	1	2	2	1
Openshaw	1	7	5	..	..	..	..	..	1	..	..	1	..
Rusholme	1	4	1	..	..	..	..	..	..	..	..	1	2
St. Clement's	1	3	3	..	..	..	..	..	..	..	..	..	..
St. George's	2	15	8	..	..	..	1	..	..	..	1	3	2
St. John's	1	3	2	..	1	..	..	..	..	..	..	..	..
St. Luke's	2	5	3	..	1	..	1	..	..	..	..	..	..
St. Mark's	2	8	3	..	..	1	1	..	..	..	..	3	..
St. Michael's	2	19	11	..	2	..	2	..	..	..	..	4	..
Withington	2	5	2	..	1	..	..	..	1	1	..	..	..
Wythenshawe	1	..	..	..	..	..	..	..	..	..	..	..	..

Ward	Number of Health Visitors working in the District	Number of Deaths among Children 2 to 5 years of age	Causes of Death—Children Two to Five Years.										
			Bronchitis and Pneumonia	Debility and Marasmus	Enteritis	Convulsions	Tuberculosis	Syphilis	Accidental Deaths	Influenza	Measles	Whooping Cough	Other Causes
All Saints	1	7	2	..	..	..	1	..	..	..	1	1	2
Ardwick	3	12	3	..	1	..	1	..	1	1	2	1	2
Beswick	3	8	3	..	..	1	..	..	..	..	3	..	1
Blackley	1	1	..	..	..	..	..	..	..	..	..	..	1
Bradford	3	7	2	..	..	..	1	..	..	..	2	1	1
Cheetham	1	6	3	..	..	1	..	..	..	..	..	..	2
Chorlton-cum-Hardy	2	10	..	..	..	..	5	..	..	..	1	..	4
Collegiate	1	2	1	..	..	..	1	..	..	..	..	..	..
Collyhurst	2	12	7	..	..	..	1	..	..	..	2	1	1
Crumpsall	1	1	..	..	..	..	..	..	..	..	..	..	1
Didsbury	1	7	1	..	..	..	..	..	..	..	1	1	4
Gorton North	2	8	5	..	..	..	..	..	..	..	..	1	2
Gorton South	2	8	2	..	..	..	1	..	1	3	..	..	1
Harpurhey	2	6	..	..	..	..	2	..	..	..	..	1	3
Levenshulme	1	3	..	..	..	..	..	..	..	..	..	..	3
Longsight	1	2	1	..	..	..	..	..	..	..	..	..	1
Medlock Street	3	13	7	..	..	..	..	..	2	..	2	1	1
Miles Platting	3	14	7	..	..	..	..	..	..	..	3	1	3
Moston	1	7	3	..	..	..	..	..	..	2	..	..	2
Moss Side East	1	4	..	..	..	..	1	..	..	..	..	..	3
Moss Side West	1	4	1	..	..	..	2	..	..	..	..	1	..
New Cross	3	9	2	..	..	..	..	..	..	1	2	..	4
Newton Heath	2	5	1	..	..	..	..	..	1	..	..	1	2
Openshaw	1	11	6	..	..	..	1	..	..	..	..	1	3
Rusholme	1	3	1	..	..	..	1	..	..	..	..	..	1
St. Clement's	1	2	1	..	..	..	..	..	..	..	..	..	1
St. George's	2	9	2	..	..	1	1	..	2	..	..	1	2
St. John's	1	..	..	..	..	..	..	..	..	..	..	..	..
St. Luke's	2	12	3	..	..	1	1	..	4	..	1	1	1
St. Mark's	2	8	2	..	..	..	1	..	3	..	..	2	..
St. Michael's	2	11	6	..	..	1	1	..	..	..	..	1	2
Withington	1	9	1	..	..	..	..	..	..	..	1	1	6
Wythenshawe	1	..	..	..	..	..	..	..	..	..	..	..	..
Total	56	221	73	..	1	5	22	..	14	7	21	18	60

VENEREAL DISEASES.

There are five main centres in the City and one in Salford for the free examination and treatment of persons suffering from venereal diseases. A certain number of cases are also treated as in-patients at the Crumpsall Hospital. Details of all the work carried out are given in the accompanying tables.

At the main centres, 15 male and 20 female clinics are held each week. In addition, a pre-maternity clinic with morning and afternoon sessions is held each week at two of the child welfare centres, where mothers and babies suffering from or suspected to be suffering from venereal disease are examined and receive any necessary treatment.

Intermediate treatment for male and female patients is given every day at St. Luke's Hospital, and on one day a week at St. Mary's Hospital for women. Similar facilities have recently been made available at the Royal Infirmary.

The auxiliary centre for females which was established in the grounds of Monsall Hospital in 1920 is also open daily, including Sundays, for the intermediate treatment of patients attending any of the authorised clinics or who may be sent for the purpose by medical practitioners. The centre forms a useful addition to the original scheme, and the attendance of patients is, on the whole, very good.

The total number of persons attending the clinics during 1931 was 8,204, which compares with 9,273 in 1930 and 9,030 in 1929. Of those who presented themselves, 1,666 were found not to be suffering from venereal disease. This prompt attention for advice is encouraging, as both syphilis and gonorrhœa are much more readily curable in the early stages. Excluding such persons, who attended on one or two occasions only, the average number of attendances by persons in the syphilis section was 12·6 and in the gonorrhœa section 17·0, compared with 10·8 and 15·6 respectively in 1930. These figures do not give a true indication of the number of attendances of the majority, as the few attendances of many defaulters are included in the calculation. The irrigation cubicles, which were in full use during the year at St. Luke's Hospital are responsible for the increase of attendances at that institution.

The number of new cases of syphilis treated at the centres in 1931 was 968 and of gonorrhœa 1,473. These figures compare with 1,360 and 1,656 for 1930. The number of gonorrhœa cases again exceeds the number of syphilis cases but the numbers in no way represent the relative frequency of the two diseases in the community.

The number of persons ceasing to attend before treatment is completed, or before the final tests of cure have been applied, remains about constant and approaches one-fourth of the total. In a proportion of these cure may be assumed, but a considerable number, it is to be feared, remain in a contagious condition and are potential spreaders of infection. In order to stimulate resumption of treatment letters are sent to defaulters, and this procedure is attended with some success as is indicated by the results shown in Table V.

Medical Practitioners and the Scheme.

Members of the medical profession in the City are from time to time advised of the facilities offered for the diagnosis and treatment of venereal disease. In the circular-letter sent out the arrangements are given in detail under the following heads :—

1. Provision of laboratory facilities for diagnosis.
2. Treatment centres and clinics.
3. Supply of approved arsenobenzene compounds.
4. The auxiliary centre for females.
5. Instructions to medical practitioners, patients, and the public.

The attendance of medical practitioners at the several clinics during the year is shown in the following table :—

Particulars	Manchester Royal Infirmary	Ancoats Hospital	Skin Hospital	St. Luke's Hospital	St. Mary's Hospital	Total
Number of Medical Practitioners attending Clinic	...	2	Nil	4	1	7
Number of attendances.	...	45	Nil	40	24	109

There are now 68 medical practitioners in the City who are qualified to receive approved arsenobenzene compounds free of cost.

During 1931, 2,206 doses of these drugs were issued to medical practitioners. The number of patients treated by them was 286. The number discharged after a full course of treatment was 60 and the number under observation at the end of the year was 158.

1,871 Wassermann outfits and 516 microscopical outfits were issued, and Table IV. shows the pathological work done in connection with this part of the scheme.

Finance.

A statement prepared by the City Treasurer shows that the total net expenditure on the scheme for the year 1931 was as follows:—

A.—*Apportionable Expenditure.*

	£	s.	d.
Manchester University, Department of Pathology ..	340	16	10
Ancoats Hospital	2,543	11	10
Manchester and Salford Hospital for Skin Diseases ..	1,348	9	4
St. Luke's Hospital	4,524	19	2
Manchester Royal Infirmary	3,361	5	4
St. Mary's Hospital	1,176	1	9
Approved Arsenobenzene Compounds issued by the Medical Officer of Health	320	2	1
Auxiliary Centre for Females	539	0	6
	£14,154	6	10

B.—*Non-apportionable Expenditure.*

	£	s.	d.
Treatment of Manchester patients by other Local Authorities	3,089	8	1
Maternity and Child Welfare Centres	356	15	9
Publicity	134	8	4
Printing, Stationery, and Advertising	46	6	2
Administration Expenses	381	13	1
	£4,008	11	5
Total expenditure for the year ..	£18,162	18	3

The total cost per attendance is 3s. 10·18d., an increase of approximately 1d. on last year's figure of 3s. 9·08d. Comparing the five hospitals, the highest cost per attendance is at Ancoats (4s. 2·38d.) and the lowest at the Manchester Royal Infirmary (3s. 6·76d.), a difference of 7·62d.

No action under the Venereal Disease Act, 1917, has been taken during the year. This Act relates mainly to the treatment of persons suffering from venereal disease by unqualified practitioners.

Work done at the Venereal Department, Crumpsall Hospital, during the year ended December 31st, 1931.

Admissions.

Total Admissions.

	Syphilis	Soft Chancre	Gonorrhœa
Males	154	..	75
Females	106	..	64
	260	..	139

Admission of Patients from other Areas (included in above figures).

	Syphilis	Soft Chancre	Gonorrhœa
Males	44	..	14
Females	16	..	17
	60	..	31

There were 42 births in this department of the hospital during the year.

Persons Treated with Approved Arsenobenzene Compounds.

	Manchester	Other Areas
Total number—Males	48	23
Females	68	11
	116	34

The total number of injections of approved arsenobenzene compounds was 742.

Pathological Examinations.

Wassermann Reaction					Gonococci					Spirochætes				
Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined	Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined	Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined
164	254	9	5	432	101	369	..	..	470	..	..	..	..	..

Manchester and Salford Approved Centres for the Treatment of Venereal Diseases.

Manchester Royal Infirmary, Oxford Road, Manchester

Skin Clinic—
Thursday ...11 a.m. (females and children)
Wednesday ...6 p.m. (males)

Genito-Urinary Clinic—
Wednesday ...11 a.m. (females and children)
Thursday ...6 p.m. (males)

Skin and Genito-Urinary Clinic—
Monday... ...6 p.m. (males)

Irrigation.
Daily for males, 9-0 a.m. to 8-0 p.m.

Ancoats Hospital, Mill Street, Ancoats, Manchester

Skin Diseases—
Wednesday ...11-30 a.m. (females)
Wednesday and Saturday } 5-30 p.m. (males)

Genito-Urinary Diseases—
Wednesday ...12 noon (females)
Wednesday and Saturday } 5-30 p.m. (males)

Manchester and Salford Hospital for Skin Diseases, Quay Street, Manchester

Skin Clinic only—
Daily except Sunday—
For men ...9 to 10 a.m.
For women and children—
9-0 to 11-0 a.m.

St. Luke's Hospital, Duke Street, Liverpool Road, Manchester

Monday ... } 5 to 7 each evening
Tuesday ... } (males and females)
Thursday ... } (males and females)
Friday ... } (males and females)
Wednesday...5 to 7 p.m. } (females
Friday ..11 to 1 p.m. } only)

Irrigation—
Monday, Tuesday, Wednesday, Thursday, and
Friday ...9 a.m. to 5 p.m.
Saturday ...9 a.m. to 1 p.m.
Sunday ...10 a.m. to 12 noon

St. Mary's Hospital, Whitworth Street

Females only—
Monday ... } 9 to 10-30 a.m.
Wednesday } 9 to 10-30 a.m.
Thursday } 9 to 10-30 a.m.
Friday ... } 9 to 10-30 a.m.
Thursday ...5 to 7 p.m.
Tuesdays ...Intermediate treatment by nurse, 7 to 8 p.m.

Child Welfare Centres (Pre-maternity Clinics)

45, *Higher Ardwick—*
Wednesday..2 to 4 p.m.
Thursday ..9 to 11 a.m.

42, *Lower Moss Lane—*
Thursday ..9 to 11 a.m.
2 to 4 p.m.

Auxiliary Centre (Females), Monsall Hospital, Newton Heath, Manchester

Sunday ...10-30 a.m. to 12-30 p.m.
Monday ...9-30 a.m. to 12 noon
4 to 8-30 p.m.
Tuesday ...9-30 a.m. to 12-30 p.m.
2 to 5-30 p.m.
Wednesday...9-30 a.m. to 12-30 p.m.
2 to 5-30 p.m.
Thursday ...9-30 a.m. to 12-30 p.m.
2 to 5-30 p.m.
Friday ...9-30 a.m. to 12 noon
4-30 to 8-30 p.m.
Saturday ...9-30 a.m. to 1-30 p.m.
The Centre is closed first Sunday in every month.

Salford Municipal Clinic, 155, Regent Road, Salford

All Venereal Diseases—
Daily, as follows, for both Sexes :—
Monday to Friday inclusive, 8-30 a.m. to 8-30 p.m.
Saturday...8-30 a.m. to 12-30 p.m.
7 to 8-30 p.m.
Sunday ...9-30 a.m. to 12-30 p.m.
3-30 to 6-30 p.m.

TABLE II.—SHOWING THE WORK DONE AT FIVE VENEREAL DISEASE CLINICS AND AT TWO CHILD WELFARE CENTRES DURING THE YEAR 1931.

PARTICULARS	MANCHESTER ROYAL INFIRMARY				ANCOATS HOSPITAL				HOSPITAL FOR SKIN DISEASES				ST. LUKE'S HOSPITAL				ST. MARY'S HOSPITAL				CHILD WELFARE CENTRE, HIGHER ARDWICK				CHILD WELFARE CENTRE, LOWER MOSS LANE				TOTALS FOR THE YEAR				GRAND TOTALS—ALL AREAS (Compared with corresponding figures for 1930)						
	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	*G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	1931			1930		
New Cases	328	3	403	236	222	..	294	513	163	..	41	156	171	41	595	200	62	..	121	212	12	..	5	88	10	..	1	44	968	44	1460	1449	3921			4334		
Total cases treated	1361	5	1211	268	454	..	539	513	457	..	41	156	457	47	1239	240	209	..	294	346	51	..	9	95	30	..	6	48	3019	52	3339	1666	8076			9134		
Cases discharged after completion of treatment	107	2	186	252	149	..	131	478	22	..	..	156	8	41	100	214	9	..	32	254	4	..	..	90	1	..	2	42	300	43	451	1486	2280			2571		
ases ceasing to attend Clinic—																																						
(A) Before completion of treatment	336	2	342	..	77	..	120	..	133	..	..	..	141	..	290	..	49	..	113	..	21	..	2	..	5	..	..	..	762	2	867	..	1631	2917		1694	2724	
(B) After completion of treatment, but before final tests as to cure	194	..	214	..	67	..	80	..	11	..	..	..	59	..	175	..	..	..	..	..	..	..	..	..	..	..	..	..	331	..	469	..	800			622		
(C) Transferred to other Treatment Clinics	182	..	167	..	..	..	1	..	33	..	41	..	19	..	19	..	6	..	4	2	8	..	2	..	2	..	..	..	250	..	234	2	486			408		
Attendances at the Out-patient Clinic	12901	30	5316	610	8009	..	3460	648	7066	..	41	247	6472	160	13138	511	2261	..	2138	1126	443	..	49	205	345	..	88	140	37497	190	24230	3487	65404	100814		65215	98070	
Intermediate treatment	..	..	..	..	..	..	..	..	..	..	..	..	604	2907	31254	..	..	..	499	146	..	..	..	..	..	..	..	..	604	2907	31753	146	35410			32855		
In-patient Days	3	..	..	..	..	..	..	..	20	..	..	..	770	..	1242	..	..	..	..	..	..	..	..	..	..	..	..	..	793	..	1242	..	2035			2673		
Doses of approved arsenobenzene compounds given	3703	..	..	..	2415	..	..	..	1581	..	..	..	2224	..	..	..	1173	..	..	..	325	..	..	..	211	..	..	..	..	..	..	..	11632			12384		
Pathological Examinations made—	Wass.	Spir.	Gon.	Other Organisms	Wass.	Spir.	Gon.	Other Organisms	Wass.	Spir.	Gon.	Other Organisms	Wass.	Spir.	Gon.	Other Organisms	Wass.	Spir.	Gon.	Other Organisms	Wass.	Spir.	Gon.		Wass.	Spir.	Gon.	Other Organisms	Wass.	Spir.	Gon.	Other Organisms	Wass.	Spir.	Gon.	Wass.	Spir.	Gon.
A. (Centre)	..	82	884	..	1373	..	778	9	..	..	..	..	..	22	2949	..	..	..	655	..	..	..	..	..	..	..	..	..	1373	104	5266	9	1373	104	5266	2162	207	5678
B. (Public Health Laboratory)	1426	..	..	..	..	..	..	..	769	6	..	..	956	..	..	1	306	..	..	..	126	..	46	..	37	..	86	..	3620	6	132	1	3620	6	132	2866	..	153
																																	4993	110	5398	5028	207	5831

* Gonorrhœa Cases transferred to Other Centres.

Table I.

General Summary of the Work Done at all the Centres during the Year.

	Syphilis		Soft Chancre		Gonorrhœa		Conditions other than venereal		Totals		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F	Totals
umber of cases on 1st January. 1931, under treatment or observation	1111	786	8	...	1438	327	61	143	2618	1256	3874
umber of cases removed from the register during any previous year which returned during the year under report for treatment or observation of the same infection	41	35	...	...	50	51	2	9	93	95	188
umber of cases dealt with for the first time during the year under report (exclusive of cases under Item 4) suffering from	572	396	44	...	1137	336	827	622	2580	1354	3934
mber of cases dealt with for he first time during the year nder report known to have eceived treatment at other Centres for the same infection	39	41	...	...	46	80	2	...	87	121	208
Totals of Items 1, 2, 3, & 4..	1763	1258	52	...	2671	794	892	774	5378	2826	8204
mber of cases discharged fter completion of treatment nd final tests of cure	198	104	43	...	372	131	834	652	1447	887	2334
umber of cases which ceased o attend before completion f treatment and were, on first ttendance, suffering from ..	474	288	2	...	662	238	...	...	1138	526	1664
mber of cases which ceased o attend after completion of reatment but before final ests of eure	195	136	...	...	420	49	...	...	615	185	800
mber of cases transferred to ther centres or to institutions, r to care of private ractitioners	161	89	...	...	208	26	...	2	369	117	486
mber of cases remaining nder treatment or observation on 31st December, 1931	735	641	7	...	1009	350	58	120	1809	1111	2920
Totals of Items 5, 6, 7, 8. and 9 .. .. Totals should agree with se of Items 1, 2, 3, and 4)	1763	1258	52	...	2671	794	892	774	5378	2826	8204
nber of cases in the following ages of syphilis included in em 6 which failed to com-ete one course of treatment..	137	89	...	...	...	...	...	...	137	89	226
nber of attendances:—) for individual attention of the medical officers ..) for intermediate treatment, *e.g.*, irrigation, dressing	23119	14378	190	...	17106	7124	1557	1930	41972	23432	65404
	604	4	2907	...	26219	8530	...	146	29730	8680	38410
Total Attendances	23723	14382	3097	...	43325	15654	1557	2076	71702	32112	103814
atients :— Total number of persons admitted for treatment during the year .. .. Aggregate number of "in-patient days" of treatment given	20	10	...	...	21	25	...	...	41	35	76
	502	291	...	...	373	869	...	...	875	1160	2035

	Under 1 year		1 and under 5 years		5 and under 15 years		15 years and over		Totals	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ber of eases of congenital hilis in Item 3 above ssified according to age iods	11	13	2	1	6	10	5	13	24	37

Auxiliary Centre for Females at Monsall Hospital.

Table III.—Showing Number of Persons Treated at the Centre during 193

Particulars	Gonorrhœa	Syphilis and Gonorrhœa	Not V.D.	Total
1. Number of females who on 1st January, 1931, were under treatment for	33	2	..	35
2. Number of new patients who attended during the year for the first time—				
(*a*) Name of Clinic from which patient came—				
Ancoats Hospital	50	..	..	50
Manchester Royal Infirmary	14	..	..	14
(*b*) Cases referred to the Centre by Medical Practitioners	14	..	..	14
3. Old patients who have returned for treatment after discontinuing attendance for some time—				
(*a*) From Clinics—				
Ancoats Hospital	13	..	..	13
Manchester Royal Infirmary..	1	..	..	1
Cases referred by Medical Practitioners	1	..	..	1
Total item 2 (new patients)	78	..	..	78
Total items 1, 2, and 3—Total patients attending during 1931	126	2	..	128
4. Cases discharged cured :—				
(*a*) Ancoats Hospital	30	2	..	32
Manchester Royal Infirmary	7	..	..	7
(*b*) Medical Practitioners' Cases	15	..	..	15
Total item 4.—Cases discharged cured	52	2	..	54
5. Discontinued attendance	33	..	..	33
6. Transferred to other Clinics	..	..	..	..
7. Number of patients still attending on Jan. 1st, 1932	41	..	..	41

The number of new cases was 78, which compares with 66 in the previous y and 56 in 1929. More than half the cases came from Ancoats Hospital.

The total number of attendances was 3,000, an average of 26·5 per case, there be 33 patients who attended on more than 30 occasions. The patients continue to attend treatment much more regularly at this centre than they do at the other treatm centres in the City.

149 Sitz baths were given during the year.

Pathological Work done during 1931.

	Wassermann Reaction					Gonococci					Spirochætes				
	Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined	Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined	Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined
A. Work done at the Public Health Laboratory (University Bacteriological Department) :															
Medical Practitioners	280	688	49	7	1,017	91	226	..	3	317	..	3	..	..	3
Institutions other than Approved Centres	136	568	24	6	728	9	53	..	..	62	..	..	..	..	..
St. Luke's Hospital	207	711	48	1	966	..	..	..	..	..	..	..	..	..	..
Manchester and Salford Hospital for Skin Diseases	319	408	40	5	767	..	..	..	..	..	1	4	..	..	5
St. Mary's Hospital	74	204	12	4	290	..	..	..	..	..	..	..	..	..	..
Manchester Royal Infirmary	621	728	75	..	1,424	..	..	..	..	..	..	..	..	..	..
Two Maternity and Child Welfare Centres	46	108	7	3	161	12	156	..	1	168	..	..	..	..	..
Total work done at Public Health Laboratory	1,683	3,415	255	26	5,353	112	435	..	4	547	1	7	..	..	8
B. Work done by Hospital Pathologist :—															
Ancoats Hospital	346	957	69	1	1,373	50	713	15	..	778	..	..	..	..	..
C. Work done by Clinical Pathologist at Clinics :—															
Manchester Royal Infirmary	..	..	..	..	..	351	533	..	..	884	32	50	..	..	82
St. Mary's Hospital	..	..	..	..	..	51	298	306	..	655	..	..	..	..	..
St. Luke's Hospital	..	..	..	..	..	405	2,283	207	54	2,949	13	9	..	..	22
Total of A, B, and C	2,029	4,372	324	27	6,726	969	4,262	528	58	5,813	46	66	..	..	112

Table V.

Letters sent to Patients urging attendance.

Name of Hospital	Manchester Royal Infirmary		Ancoats Hospital		Skin Hospital		St. Luke's Hospital		St. Mary's Hospital		Totals	
Number of letters sent ..	1,051		66		154		91		490		1,852	
Results :—		%		%		%		%		%		%
(1) No reply	522	49·7	40	60·6	58	37·7	39	42·8	305	62·3	964	52·1
(2) Wrong addresses (letter returned)	..	..	6	9·1	4	2·6	31	34·1	41	8·4	82	4·4
(3) Replied "under own doctor"	49	4·7	2	3·0	10	6·5	..	..	6	1·2	67	3·6
(4) Replied "other causes for absence"	36	3·4	..	..	5	3·3	1	1·1	9	1·8	51	2·8
(5) Returned and still attending	216	20·6	3	4·6	54	35·0	6	6·6	43	8·8	322	17·4
(6) Returned for a period only	105	10·0	3	4·6	21	13·6	9	9·9	61	12·4	199	10·7
(7) Returned and then transferred to other Centres	106	10·0	2	3·0	..	..	..	..	1	0·2	109	5·9
(8) Returned and discharged as cured	17	1·6	10	15·1	2	1·3	5	5·5	24	4·9	58	3·1
	1,051		66		154		91		490		1,852	

PUBLIC HEALTH EDUCATION.

Lectures.

The interest of the public in matters appertaining to health continues and the department has attempted to satisfy the demand by offering a more extensive syllabus of lectures on general health topics, courses of lectures on smoke abatement to manufacturers, engineers and others interested in the limitation of industrial smoke, addresses to midwives, health visitors and sanitary inspectors, and instruction to troops of boy scouts qualifying for the Public Health Man's badge. These, as far as possible, are given by experts in their various branches, and that they are appreciated may be deduced in that the number delivered this year was 90.

Post-Graduate Course of Lectures.

A new development in the educational work of the Public Health Department took place in the autumn when a refresher course of eight lectures was arranged for fully trained and qualified nurses employed in all branches of public health work. This course extended over the winter months of 1931.

The syllabus was as follows :—

1. Thursday, 8th October, 1931.
   "Open Air, Wind, and Health."
   Professor Sir Leonard Hill, M.B., F.R.S.,
   Late Director of the Department of Applied Physiology, National Institute of Medical Research.
2. Wednesday, 14th October, 1931.
   "Recent Work on Endocrine Glands."
   Dr. Eugenia R. A. Cooper, M.D., Ch.B., M.Sc.,
   Lecturer in Histology and Anatomy, Manchester University.
3. Wednesday, 21st October, 1931.
   "Recent Work on Endocrine Glands"—*continued.*
   Dr. Eugenia R. A. Cooper, M.D., Ch.B., M.Sc.,
4. Wednesday, 28th October, 1931.
   "Rheumatism and Rheumatic Heart Disease in Children."
   Hugh T. Ashby, Esq., B.A., M.D., F.R.C.P.,
   Honorary Physican, Royal Manchester Children's Hospital.
   Honorary Physican, Salford Royal Hospital.
5. Wednesday, 4th November, 1931.
   "Bodily Posture in Childhood."
   Harry Platt, Esq., M.D., M.S., F.R.C.S.,
   Senior Honorary Surgeon, Ancoats Hospital, Manchester.
   Clinical Lecturer in Orthopœdics, Manchester University.
6. Wednesday, 11th November, 1931.
   "Bodily Posture in Childhood"—*continued.*
   Harry Platt, Esq., M.D., M.S., F.R.C.S.
7. Wednesday, 18th November, 1931.
   "Catarrh in the Respiratory Tract in Children and its Effects."
   C. Paget Lapage, Esq., M.D., Ch.B., F.R.C.P.,
   Honorary Physician, Royal Manchester Children's Hospital, and for Children, St. Mary's Hospital, Manchester.
   Lecturer, Diseases of Children, Manchester University.
8. Wednesday, 25th November, 1931.
   "Other Respiratory Disorders in Children."
   C. Paget Lapage, Esq., M.D., Ch.B., F.R.C.P.

One hundred and seventy-eight nurses, drawn from Manchester and 21 neighbouring local authorities, took the course (fee 10s. 6d.), a result sufficiently successful to warrant its becoming a permanent institution during the winter session.

Exhibition.

As is now customary, a large area was reserved in the "Health and Hygiene" Exhibition promoted by the "Daily Dispatch," where the advantages of a clean atmosphere, clean food and healthy surroundings, were stressed, while as a contrast there were stalls showing the dangers of dirt, the uneconomical and unhealthy methods of burning raw coal, and the unhygienic manner in which are carried on many small "mixed" grocery businesses. Space was also reserved for Dental and Venereal Diseases exhibits, and the Medical Superintendent of Baguley Sanatorium had on view and for sale the work produced in Baguley Crafts by the patients undergoing occupational therapy.

In taking part in exhibitions a large public is reached, and the success of the undertaking is enhanced by the teaching of the sanitary inspectors and health visitors who are in constant attendance at the respective exhibits.

"Better Health."

On 10th February, 1931, the Public Health Committee agreed on a three years' scheme for the monthly distribution of 10,000 copies of the journal "Better Health." Each number has as its principal matter a standard series of articles on health subjects used for this magazine throughout the country generally. In addition there are two pages of local matter (one of which is an article written by a specialist on the subject in the department or on the school medical staff) and local advertisements, the nature of which is in each case approved by the Medical Officer of Health.

Since its inception in October to the end of the year the following articles have been contributed by the officers of this department—"Public Education in Health," "Pasteurisation of Milk," and "Protection against Diphtheria."

Distribution is effected through the Public Free Libraries, the Maternity and Child Welfare Centres, the School Clinics, the Tuberculosis Clinic, Baguley Sanatorium, and by 20 large firms throughout the city. The issue of this journal, it is expected, will prove a very efficient and inexpensive method of bringing health matters to the notice of the general public, and letters of appreciation to this effect have already been received.

The only cost to the city is that of distribution, amounting to approximately 23s. per month.

PRIVATE AMBULANCE SERVICE.

Previous to October, 1931, this service was provided by the Watch Committee. On that date the Public Health Committee took it over, and the arrangements made to that end are given in the subjoined copy of a circular letter sent out to medical practitioners and others interested.

On and after 1st October, 1931, the private ambulance service at present administered by the Watch Committee will be controlled by the Public Assistance Committee on behalf of the Public Health Committee.

Ambulances must then be ordered from the Ambulance Department, 33, Mill Street, Ancoats, Manchester. (Telephone : City 5852.)

The service provides for the removal by motor ambulance of NON-INFECTIOUS private patients from their homes to voluntary and municipal hospitals, nursing and convalescent homes, etc.

The following charges, at present in force, will be continued :—

(*a*) Conveyance of less than one mile within the City boundary—5/– per removal.

(*b*) Conveyance of more than one mile within the City boundary—7/6 per removal.

(*c*) Conveyance beyond the City boundary—Special charge dependent on distance and type of road, but not to exceed 1/6 per mile.

The person responsible for the payment of the charge will be required to fill up and sign a form, which will be handed to him by the driver before the case is removed.

Accounts for the charges due will be forwarded by the City Treasurer to the persons responsible for payment within a day or two of the removal.

When the income of the household is less than 40/– per week, the person responsible for the payment of the account may make application (in the form on the back of the account) for the account to be cancelled. The practice of doctors giving certificates enabling patients to be conveyed free will be discontinued.

To ensure that only non-infectious cases are conveyed in these vehicles, it has been arranged that when application is make by a person other than a doctor, the officer in charge of the ambulance station must ascertain the name of the doctor in attendance, his telephone number, and, if possible, the nature of the complaint.

Cases of accident in streets and works will continue to be dealt with by the Watch Committee as heretofore.

The existing arrangements for the removal of infectious cases to Monsall and Clayton Vale Hospitals will remain unaltered.

DISINFECTING STATION.

The following table gives details of the articles disinfected :—

ARTICLES DISINFECTED AT THE DEPOT DURING THE YEAR 1931.

Month ending	Blankets	Sheets	Pillows	Bolsters	Quilts	Mattresses	Beds	Carpets	Clothing	Sundries	Totals
1931 January ..	800	293	747	272	344	234	366	10	710	370	4,
February ..	698	275	610	210	276	237	312	12	1,265	293	4,
March	1,733	274	758	235	465	219	342	15	803	657	5,
April	964	277	765	173	397	205	274	8	766	145	3,
May	740	313	661	191	430	216	295	12	1,138	116	4,
June	1,747	238	606	172	366	180	257	22	432	298	4,
July	773	276	534	177	350	153	295	12	474	214	3,
August	797	231	1,468	152	308	172	226	5	347	145	3,
September ..	991	230	555	148	360	140	261	5	553	193	3,
October ..	1,420	270	659	169	393	195	274	6	794	476	4,
November ..	653	310	630	190	470	176	308	16	491	241	3,
December ..	618	252	604	184	409	187	263	3	358	56	2,
Totals ..	11,934	3,239	8,597	2,273	4,568	2,314	3,473	126	8,131	3,204	47,

Steam disinfector	43,551	Articles.
Formic Aldehyde Chamber	3,441	909 Mattresses. 2,532 Clothing.
„ „	867	Books.
	47 859	Total.

REPORT OF THE SANITARY SECTION.

Food Supervision.

Prevention of Food Adulteration.

The number of samples procured by the three sampling officers under the Food and Drugs (Adulteration) Act, 1928, and submitted to the City Analyst for chemical analysis was 3,242, comprising 109 different articles of food and drugs. Of these, 2,692 were statutory, and 550 informal samples. Analysis revealed adulteration in 66 statutory and 22 informal samples. With regard to the statutory samples, prosecutions were instituted in fifteen cases resulting in the imposition of fines and costs in 14 cases amounting to a total of £29 17s. 6d. One summons relating to a sample of tincture of iodine was adjourned *sine-die*. Eight of the offenders were cautioned, and in the remaining 43 cases, where the adulteration was slight, no action was taken.

In every instance where an informal sample showed adulteration a statutory sample was obtained immediately.

One sample (coffee) was submitted by a member of the public and found to be genuine.

It was suspected that "bread and butter" sold in certain shops and eating houses near Smithfield Market was actually bread and margarine. Eight statutory and 18 informal samples were procured. Analysis disclosed that the alleged butter was margarine in four statutory and nine informal samples. Prosecutions were instituted in four cases and fines and costs imposed amounting to £4 17s. 0d.

Milk.

There are obvious reasons why milk demands a greater amount of supervision than any other article of food.

The foregoing figures include 1,136 statutory and 246 informal samples of milk taken for chemical analysis. Of these, 55 statutory and 11 informal samples were adulterated. In 41 of the statutory samples the adulteration was only slight.

During the past three years there has been a steady decrease in the percentage of adulteration, as will be seen by the following table :—

Year	Percentage of Samples Adulterated	
	Milk	All Foods and Drugs
1928	13·61	5·90
1929	8·81	3·97
1930	6·73	3·15
1931	4·77	2·71

The sampling officers also procured 774 samples of milk from railway stations and vehicles entering the City by road and submitted them for bacteriological examination.

Public Health (Preservatives in Food) Regulations, 1925–7.

During the year the provisions of these Regulations have been enforced.

All samples governed by the Regulations have been examined by the City Analyst for the presence of preservatives. Four samples were found to contravene the regulations, viz. :—

Article	Preservative found	Result
Milk	Twenty parts Formic Aldehyde per million	Vendor fined £1 and 10s. 6d. costs
Cream	0·08 per cent. Boric Acid	Vendor fined 5s. and 10s. 6d. costs
*Sausage ..	121 parts Sulphur Di-oxide per million	Cautioned
*Milk	Four parts Formic Aldehyde per million	No certificate issued

* Subsequent samples taken were found to conform to the Regulations.

Table No. 1.—Showing the Proceedings taken under the Provisions of the Adulteration of Food and Drugs and the Margarine Acts during 1931.

Article	Number of Samples obtained	Number Adulterated	Number not Adulterated	Prosecutions: Number ordered to be Summoned	Prosecutions: Number Cautioned	Prosecutions: No action taken. Slightly Adulterated or Informal Sample	Prosecutions: Number Summoned before Magistrates	Prosecutions: Number Fined	Prosecutions: Number ordered to pay Costs only	Prosecutions: Number Adjourned	Prosecutions: Amount of Fines Imposed	Prosecutions: Amount of Costs ordered to be Paid
											£ s. d.	£ s. d.
Arrowroot and Corn Flour	18	..	18	..	..	..	..	..	..	..	..	..
Bacon and Ham	29	..	29	..	..	..	..	..	..	..	..	..
Baking Powder	14	..	14	..	..	..	..	..	..	..	..	..
Beer	36	..	36	..	..	..	..	..	..	..	..	..
Beef Dripping	14	..	14	..	..	..	..	..	..	..	..	..
Bread	27	..	27	..	..	..	..	..	..	..	..	..
Butter (on Bread)	26	13	13	4	..	9	4	4	..	..	2 0 0	2 17 0
Butter	68	..	68	..	..	..	..	..	..	..	..	..
Camphorated Oil	17	..	17	..	..	..	..	..	..	..	..	..
Castor Oil	15	..	15	..	..	..	..	..	..	..	..	..
Cheese	22	1	21	..	..	1	..	..	..	..	..	..
Cider	11	..	11	..	..	..	..	..	..	..	..	..
Cocoa	23	..	23	..	..	..	..	..	..	..	..	..
Cod Liver Oil	18	..	18	..	..	..	..	..	..	..	..	..
Coffee and Coffee Essence	47	..	47	..	..	..	..	..	..	..	..	..
Confectionery and Mincemeat	148	..	148	..	..	..	..	..	..	..	..	..
Cream	28	1	27	1	..	..	1	1	..	..	0 5 0	0 10 6
Drugs	375	3	372	2	..	1	2	1	..	1	0 10 0	0 10 6
Flour	56	..	56	..	..	..	..	..	..	..	..	..
Fish (Tinned and Potted)	23	..	23	..	..	..	..	..	..	..	..	..
Fruit (Tinned)	19	..	19	..	..	..	..	..	..	..	..	..
Honey	4	..	4	..	..	..	..	..	..	..	..	..
Jams	35	..	35	..	..	..	..	..	..	..	..	..
Jellies	4	..	4	..	..	..	..	..	..	..	..	..
Ketchup and Sauces	5	..	5	..	..	..	..	..	..	..	..	..
Lard	42	..	42	..	..	..	..	..	..	..	..	..
Margarine	36	..	36	..	..	..	..	..	..	..	..	..
Meat (Tinned and Prepared)	64	1	63	..	1	..	..	..	..	..	..	..
Milk	1382	66	1316	7	7	52	7	7	..	..	15 0 0	6 14 0
Milk(Condensed & Evaporated)	22	..	22	..	..	..	..	..	..	..	..	..
Mineral Waters, Cordials, etc.	48	1	47	1	..	..	1	1	..	..	1 0 0	0 10 6
Mustard	8	..	8	..	..	..	..	..	..	..	..	..
Oatmeal	21	..	21	..	..	..	..	..	..	..	..	..
Olive Oil	18	..	18	..	..	..	..	..	..	..	..	..
Parley	31	..	31	..	..	..	..	..	..	..	..	..
Pepper	29	..	29	..	..	..	..	..	..	..	..	..
Pickles	12	..	12	..	..	..	..	..	..	..	..	..
Rice, Tapioca, etc.	68	..	68	..	..	..	..	..	..	..	..	..
Salt	3	..	3	..	..	..	..	..	..	..	..	..
Spices	18	..	18	..	..	..	..	..	..	..	..	..
Sugar	32	..	32	..	..	..	..	..	..	..	..	..
Tea	40	..	40	..	..	..	..	..	..	..	..	..
Treacle and Golden Syrup	9	..	9	..	..	..	..	..	..	..	..	..
Tripe	7	..	7	..	..	..	..	..	..	..	..	..
Vegetables (Tinned) Prepared	16	..	16	..	..	..	..	..	..	..	..	..
Vinegar	23	..	23	..	..	..	..	..	..	..	..	..
Wines	24	..	24	..	..	..	..	..	..	..	..	..
Whiskey	43	..	43	..	..	..	..	..	..	..	..	..
Rum	39	2	37	..	..	2	..	..	..	..	..	..
Brandy	19	..	19	..	..	..	..	..	..	..	..	..
Gin	20	..	20	..	..	..	..	..	..	..	..	..
Fruit (Dried)	65	..	65	..	..	..	..	..	..	..	..	..
Raw Fruit	3	..	3	..	..	..	..	..	..	..	..	..
Distilled Water	8	..	8	..	..	..	..	..	..	..	..	..
Paraffin Oil	11	..	11	..	..	..	..	..	..	..	..	..
Totals	3243	88	3155	15	8	65	15	14	..	1	18 15 0	11 2 6

Registration of Wholesale Dealers in Margarine.

There are 150 premises on the register, to which periodical visits have been paid. Five were registered during 1931.

Food preparing premises.

New powers have been conferred upon the Corporation by Section 32 of the Manchester Corporation (General Powers) Act, 1930, which provides for the registration, with certain exceptions, of premises used for the manufacture of potted or preserved meat, fish, or other food intended for sale. The Act also empowers the Corporation to refuse registration of unsuitable premises.

After consultation with the Legal Department regarding the interpretation of the Act it was decided for the present to deal with premises used for the manufacture of pickled meat, boiled, roast, or smoked ham or pork, sausages, pressed beef, brawn, and boiled crab or lobster.

During the year, 546 applications for registration were received of which 15 were subsequently withdrawn.

All the premises were inspected and detailed reports submitted to the Medical Officer of Health as to structural condition, means of light and ventilation, drainage, water supply, sanitary accommodation, utensils, facilities for cleansing, intermingling of business with domestic arrangements, etc.

After the inspections had been completed, sanction was granted at 333 premises. Whilst many of these could not be deemed to be entirely satisfactory they were reported to be clean, and consideration was given to the fact that the businesses were already established.

Registration was refused in three cases, where the premises were unsuitable and incapable of being rendered fit at reasonable cost.

One hundred and ninety-five other premises fell short of the standard of fitness in the following respects, viz. :—

Three were dirty.

One hundred and forty-one had sanitary defects, including lack of offal bins.

Fifty-one were dirty and also had sanitary defects.

At six of these places the work necessary was extensive in character, and specifications of alterations needed were prepared in the department.

The requirements of the Medical Officer of Health were eventually fulfilled in 155 cases and 40 stand adjourned. The number registered at the end of the year was 488.

During the year 546 primary and 1,342 subsequent inspections were made.

Bakehouses.

Close supervision has been maintained over all bakehouses to ensure that food manufactured therein is produced under hygienic conditions. Steady progress is being maintained in uplifting the standard of fitness and the cleanliness of these premises and their equipment.

6,499 inspections of bakehouses were made during 1931. In 61 instances bakehouses were found to be dirty. Cleansing was carried out in 55 cases after cautions by the Inspectors. Six of the offenders were prosecuted. In four cases fines were in inflicted amounting to £3 10s. Two of the summonses were withdrawn as the work had been carried out prior to the summonses being heard.

Sanitary defects such as broken wall and floor surfaces, etc., were reported at ten bakehouses. Remedial measures were effected in seven instances after cautions by Inspectors. Three statutory notices were served and subsequently complied with.

Forty-four applications for registration of new bakehouses were made during the year. Six were withdrawn when the applicants ascertained the work necessary to render the premises suitable. Five were refused on grounds of unfitness. Thirty-three were placed on the register after the requirements of the Medical Officer of Health had been fulfilled.

Plans of seven new bakehouses submitted to the Town Planning and Buildings Committee were referred to and subsequently approved by the Medical Officer of Health.

Twenty-four bakehouses have been taken off the register, and it is satisfactory to note that of these 14 were underground bakehouses.

The total number on the register at the end of the year was 657, of which 33 were underground. Twenty-two of the latter are not in use at present.

Housing Requirements 1931 to 1945.

In the annual report for 1930 was given the quinquennial statement of proposed work in slum clearance in Manchester prepared in accordance with the requirement of the Ministry of Health.

In 1931 a further communication from the Ministry required a complete survey of housing requirements to be submitted which would form the basis of future quinquennial statements,

This survey was prepared and submitted by the Medical Officer of Health to the City Council as follows :—

Natural Increase of Population.

The average natural increase of population over the years 1921 to 1926 was 3,464 persons per annum. This figure, when divided by the number of persons per house at that date, viz. : 4·5, gives a housing requirement of 770 houses per annum. Though a conservative estimate, this may be accepted for the purpose of the calculation.

The number of houses built up to the end of 1930 is 16,162.

Four years of natural increase, 1927 to 1930, absorb 3,080 of these, and the shortage of houses due to cessation of building during wartime absorbs a further 2,000 houses, leaving a balance of 11,082 to be deducted from the total requirements now under consideration (1931 to 1945 inclusive).

Housing requirements from 1931 *to* 1945.

Natural increase of population (15 years at 770 per annum) ..	11,550
Overcrowding.—Figures compiled from the house to house inspections at the end of 1926 showed that 14 per cent. were overcrowded. On this basis, approximately 22,000 houses were overcrowded in the City at that time. A considerable proportion of these (probably one half) occurs in proposed clearance or improvement areas. It is thus estimated that the number of new houses required to abate overcrowding will be	11,000
Demolitions, repairs, etc.—The operations under the Housing Act, 1930, with the varying classifications (clearance areas, improvement areas and individual houses) as determined at the end of 1926 will require	30,632
Industrial development	Nil
Total requirements	53,182
Deduct balance before mentioned	11,082
Total net requirements	42,100

If these requirements are to be met within the three quinquennial periods the rate of building required will be as follows :—

1931 to 1935 at 3,000 per annum	15,000
1936 to 1940 at 3,000 per annum	15,000
1941 to 1945 at 2,420 per annum	12,100
Total	42,100

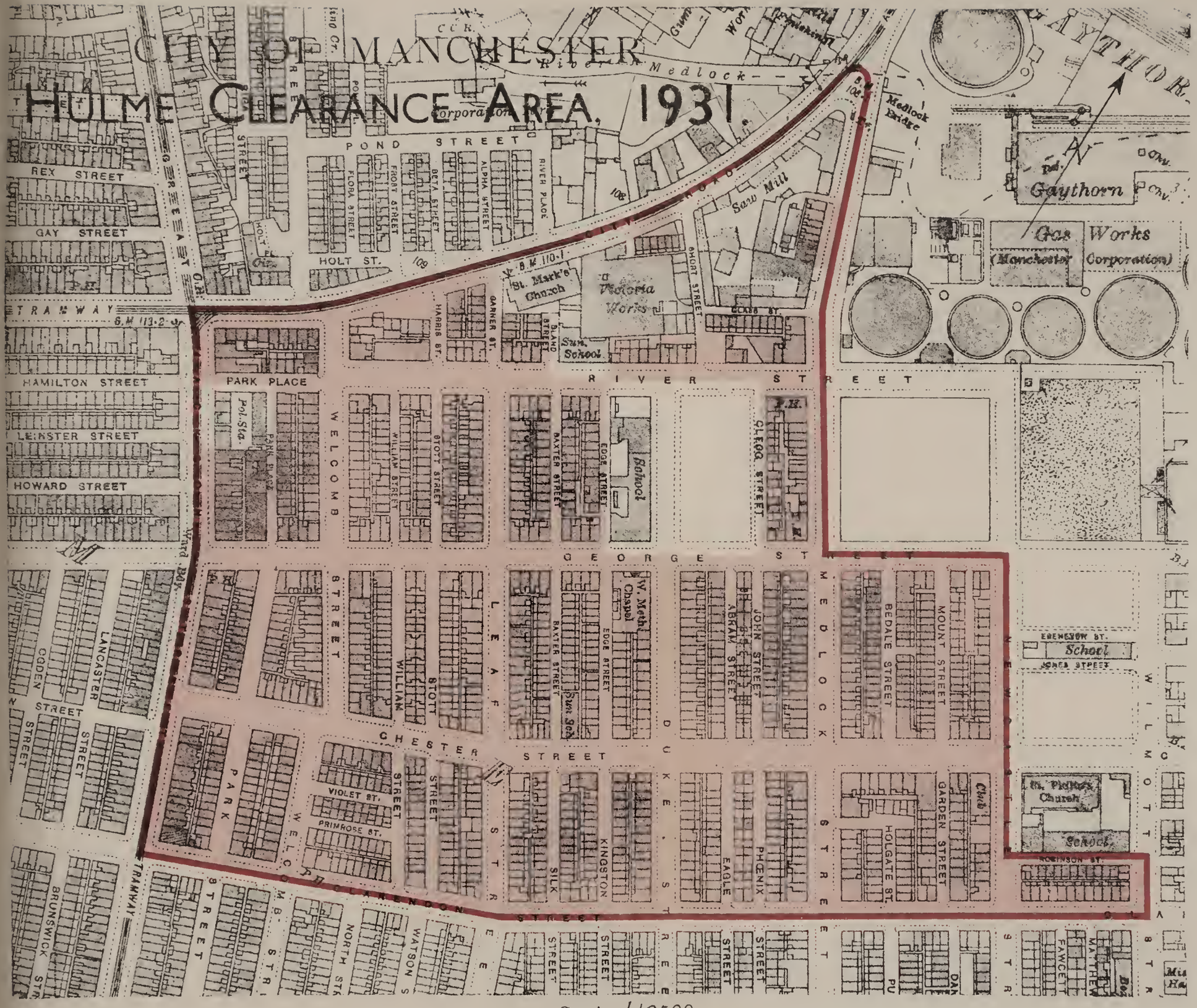
Housing Activities.

Slum Clearance under the Housing Act, 1930.

In accordance with the proposals contained in the quinquennial statement approved by the City Council in 1930 and sent to the Ministry of Health, definite work directed towards slum clearance under these new powers was initiated.

Four inspectors were appointed special housing inspectors for slum clearance and improvement purposes. A joint committee also was formed consisting of representatives of the Public Health Committee and the Housing Committee who should in the first instance consider all matters relating to slum clearance

Plan referred to



and improvement so that questions of re-housing of dispossessed persons may be considered co-incidentally with the action to be taken on the representations made by the Medical Officer of Health for such clearance or improvement areas.

The four inspectors were set to make a special survey of the Hulme housing area which in 1920 was represented as an insanitary area by the late Dr. Niven.

In July, 1931, an official representation was made of this area in Hulme by the Medical Officer of Health, the boundaries being slightly extended beyond that originally represented by Dr. Niven. The representation is that this area is a clearance area and was approved by the City Council. The representation with accompanying schedules is as follows :—

Public Health Office,
Civic Buildings,
1, Mount Street,
Manchester.

Name of Local Authority : The Lord Mayor, Aldermen, and Citizens of the City of Manchester.

Designation of Area : Hulme Clearance Area.

OFFICIAL REPRESENTATION OF THE MEDICAL OFFICER OF HEALTH.

To the Council of the
City of Manchester.

I, Robert Veitch Clark, Medical Officer of Health for the City of Manchester, do hereby represent that, in my opinion, within a certain area (which area is edged red and coloured pink on the map marked " City of Manchester, Hulme Clearance Area, 1931 "), described in the schedule hereto—

(i.) that the dwelling-houses in that area are by reason of disrepair and/or sanitary defects unfit for human habitation, and/or are by reason of their bad arrangement, or the narrowness or bad arrangement of the streets, dangerous or injurious to the health of the inhabitants of the area, and that the other buildings in the area are for a like reason dangerous or injurious to the health of the said inhabitants ; and

(ii.) that the most satisfactory method of dealing with the conditions in the area is the demolition of all the buildings in the area.

Dated this 22nd day of June, 1931.

(Signed) R. VEITCH CLARK,
Medical Officer of Health.

THE SCHEDULE REFERRED TO.

Definition of Area.—The area to which the representation relates is coloured pink and is contained within the inner edge of the boundary line coloured red on the map accompanying this representation, the line commencing at the junction of City Road and Medlock Street, proceeding along Medlock Street to George Street, thence along George Street to Newcastle Street, along Newcastle Street to Robinson Street, along Robinson Street to Wilmot Street, along Wilmot Street to Clarendon Street, along Clarendon Street to Great Jackson Street, along Great Jackson Street to City Road, along City Road to the point of commencement, *i.e.*, the junction of City Road and Medlock Street.

The lands and properties which are uncoloured but are within the inner edge of the boundary line coloured red are " Island " sites and excluded from the area.

Statistics submitted with the Medical Officer's Representation.

DEATH RATES—AREA REPRESENTED COMPARED WITH MEDLOCK STREET WARD AND THE CITY, FOR FIVE YEARS 1925–1929.

Death Rates—All Ages (per 1,000 of population).

Area represented	21·8
Medlock Street Ward	15·3
City	13·9

Infantile Mortality (per 1,000 births).

Area represented	135
Medlock Street Ward	101
City	91

Death Rates—Various Diseases (per 1,000 of population).

	Measles	Diphtheria	Diarrhœa	Phthisis	Nervous Diseases	Heart and Blood Vessel	Bronchitis	Pneumonia	Wasting Diseases
Area represented	0·53	0·27	1·06	2·39	0·80	4·52	3·19	2·92	1·33
Medlock Street Ward	0·24	0·12	0·41	1·74	0·56	3·42	1·95	1·59	0·80
City	0·17	0·12	0·25	1·41	0·49	2·99	1·44	1·29	0·95

Summary of Certain Facts relating to the Area represented.

Total number of houses	1,076
Total population	4,767
Number of persons per house	4·43
Percentage of houses containing lodgers	27·9
Number of houses required to rehouse dispossessed families	1,256

The housing inspectors also completed detailed inspections of an area in West Gorton, comprising 441 houses and 60 business premises, and of the Heaton Park Hutments comprising 100 dwellings and two business premises. These reports were tabulated and summarised.

Preliminary surveys were also made in various wards of the City to determine suggested future clearance or improvement areas. Detailed inspections were made of two houses proposed to be dealt with under Section 19 of the Housing Act, 1930, but these houses have since been closed voluntarily and demolished. In February, 1931, the Medical Officer of Health also prepared a survey of the housing requirements of the City for the period 1931 to 1945 given on page 217.

House Inspections.

Systematic inspection of dwelling-houses under Section 8 of the Housing Act, 1925, was continued as in previous years.

Primary inspections were made at 8,878 houses, which have been classified as follows :—

Unfit for habitation	3,538
Defective but remediable without reconstruction	4,470
Good	870

Details of these inspections are given in Tables A, B, and C, pages 222, 223, and 224.

Primary inspections have been made under the Public Health Acts at 12,432 houses.

3,302 houses were rendered fit as the result of service of informal notices.

Statutory notices for repairs under section 17 of the Housing Act, 1930, were issued in respect of 1,270 houses. 969 were rendered fit by the owners and 38 by the local authority in default.

805 houses were dealt with by notice under the Public Health Acts, and existing defects were remedied in 533 cases by the owners and in 248 cases by the local authority in default.

Houses on List for the consideration of the Unhealthy Dwellings Sub-Committee.

There are many thousands of houses which are on the list for the consideration of the Unhealthy Dwellings Sub-Committee, and some upon which closing orders have been made but not enforced owing to housing shortage. Whilst it is not practicable to repair these houses thoroughly, urgent defects, such as choked drains, leaky roofs, broken floors, and yard surfaces, etc., are frequently reported and receive immediate attention. During the year letters were sent to owners regarding urgent defects at 3,414 houses of this character, and complied with at 2,898 houses. In the remaining cases it was necessary to serve statutory notices.

Overcrowding.

Many cases of overcrowding have been found during the year, but the shortage of houses at rents which the affected persons can afford to pay renders the service of notices practically futile. Representations were made to the Housing Director in 115 cases with a view to the overcrowded families being allocated Corporation houses, and 55 families were accommodated. Sixty-seven cautionary letters were sent, resulting in the overcrowding being abated in 18 cases.

Table A.

Details of House-to-House Inspections made during 1931 under Section 8, Housing Act, 1925.

Wards	Number of Houses Inspected	Number of Rooms per House								Business Premises		Overcrowded Houses		
		1	2	3	4	5	6	7	Over 7	Partial	Total	Registrar-General's Standard	Manchester Standard	Social Standard
All Saints	266	1	4	29	168	19	22	11	12	23	4	8	58	37
Aldwick	251	..	2	33	84	79	35	12	6	22	3	9	37	28
Beswick	444	..	1	65	248	107	22	1	..	22	4	15	88	81
Blackley	227	..	1	30	123	51	19	1	2	40	17	2	38	28
Bradford	215	..	..	102	76	37	..	..	..	11	1	17	59	57
Cheetham	212	..	..	1	12	24	167	2	6	11	2	..	19	3
Chorlton-cum-Hardy	418	..	..	..	272	102	33	8	3	5	..	..	32	40
Collegiate Church	211	..	..	4	109	37	31	19	11	32	..	..	36	28
Collyhurst	297	1	1	46	238	9	1	..	1	21	1	16	78	65
Crumpsall	173	..	2	40	66	33	9	10	13	7	3	1	17	19
Didsbury	37	1	1	4	8	3	5	2	13	16	..	1	2	2
Exchange	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gorton North	192	..	..	60	93	39	..	..	..	..	..	12	45	45
Gorton South	197	..	..	38	43	115	..	1	..	3	..	6	30	24
Harpurhey	234	..	..	8	168	55	2	1	..	16	..	3	14	22
Levenshulme	281	..	1	9	74	166	22	4	5	20	..	..	14	13
Longsight	406	..	..	..	185	163	27	16	15	2	..	..	25	24
Medlock Street	310	..	10	33	171	71	13	8	4	38	6	13	36	34
Miles Platting	312	..	2	141	120	46	3	..	..	22	4	21	95	78
Moston	160	..	..	7	120	29	1	1	2	2	1	1	14	15
Moss Side East	222	..	3	3	27	33	16	32	108	23	4	1	12	11
Moss Side West	405	..	..	..	4	181	116	89	15	6	..	..	14	..
New Cross	373	..	21	85	206	55	5	1	..	32	..	31	99	87
Newton Heath	184	..	..	32	105	46	..	1	..	4	..	5	35	26
Openshaw	313	..	1	103	148	52	5	4	..	49	5	10	67	55
Oxford	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rusholme	296	..	..	4	92	125	64	11	..	21	2	2	19	19
St. Ann's	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Clement's	274	..	19	32	200	15	5	1	2	15	3	13	82	76
St. George's	491	..	31	103	231	104	17	4	1	70	9	22	70	69
St. John's	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Luke's	278	..	4	9	147	79	25	6	8	18	..	7	30	29
St. Mark's	517	..	22	170	185	129	10	1	..	36	2	24	97	88
St. Michael's	296	2	5	89	125	50	12	9	4	24	..	15	70	54
Withington	369	..	10	49	206	83	21	..	..	33	..	5	24	28
Wythenshawe	17	..	..	4	4	5	4	..	..	2	..	1	3	2
Totals	8,878	5	141	1,333	4,058	2.142	712	256	231	646	71	263	1,359	1,187

Details of House-to-House Inspections made during 1931 under Section 8, Housing Act, 1925.

Wards	Number of Houses Inspected	Want of Cleanliness	Inadequate Light	Inadequate Ventilation	Dampness	Without proper accommodation for		Disrepair	Bad Arrangement	Classification				
						Food Store	Domestic Washing			Good	Minor Defects	Serious Defects: Remediable without reconstruction	Serious Defects: Irremediable without reconstruction	Unfit
All Saints	266	12	205	225	59	255	100	185	217	..	7	31	98	130
Ardwick	251	14	27	161	153	238	56	241	113	2	6	138	51	54
Beswick	444	8	127	147	231	405	45	418	168	10	209	38	73	114
Blackley	227	1	7	7	44	211	17	198	4	..	157	67	..	3
Bradford	215	32	94	107	145	206	38	215	84	1	38	91	4	81
Cheetham	212	6	8	40	135	205	21	197	9	15	53	134	10	..
Chorlton-cum-Hardy	418	..	..	8	61	366	11	342	..	70	312	34	2	..
Collegiate Church	211	..	11	15	70	156	17	140	19	43	35	112	18	3
Collyhurst	297	11	282	256	182	296	39	292	278	..	1	2	244	50
Crumpsall	173	..	9	11	47	140	7	111	27	69	42	38	1	23
Didsbury	37	1	3	7	8	15	1	31	6	..	31	..	5	1
Exchange	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gorton North	192	19	3	86	122	192	25	155	2	14	20	148	10	..
Gorton South	197	12	1	45	95	158	21	156	..	39	80	75	..	3
Harpurhey	234	1	13	13	41	209	1	40	21	124	14	75	17	4
Levenshulme	281	7	23	25	49	271	11	271	11	4	240	21	2	14
Longsight	406	..	..	9	108	370	14	111	1	40	99	267	..	..
Medlock Street	310	81	249	259	153	309	80	245	274	..	..	35	2	273
Miles Platting	312	6	137	164	86	307	45	229	146	5	61	63	29	154
Moston	160	..	..	3	35	144	14	42	1	50	16	92	..	2
Moss Side East	222	..	29	36	54	217	18	85	21	61	9	132	..	20
Moss Side West	405	5	31	5	64	371	16	285	..	120	239	45	1	..
New Cross	373	117	277	328	228	366	71	316	318	..	3	43	162	165
Newton Heath	184	1	18	49	127	183	23	122	76	22	28	56	76	2
Openshaw	313	3	79	173	167	286	30	298	203	..	25	77	157	54
Oxford	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rusholme	296	1	3	3	104	295	4	74	1	32	97	161	4	2
St. Ann's	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Clement's	274	39	168	175	154	270	34	274	274	..	..	..	155	119
St. George's	491	89	426	458	239	483	87	252	470	..	..	1	3	487
St. John's	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Luke's	278	6	42	94	38	262	20	70	39	12	27	190	28	21
St. Mark's	517	31	187	370	407	516	97	434	186	..	59	239	27	192
St. Michael's	296	22	234	249	61	290	46	60	271	..	11	27	3	255
Withington	369	4	36	83	99	196	41	136	115	137	43	65	9	115
Wythenshawe	17	3	1	6	16	16	5	16	4	..	7	4	..	6
Totals	8,878	532	2,730	3,617	3,582	8,204	1,055	6,041	3,359	870	1,969	2,501	1,191	2,347

Table C.

Details of House-to-House Inspections made during 1931 under Section 8, Housing Act, 1925.

This Table is comparable with figures given in the Census Report, 1911.

No. of Rooms per Tenement	No. of Individuals in Private Families or Tenements			No. of Individuals per Room			No. of Children under 10 years per Family or Tenement			Overcrowding		
	Families or Tenements	Population	Individuals per Family or Tenement	Rooms	Population	Individuals per Room	Families or Tenements	Children under 10	Children per Family or Tenement	Registrar-General's Standard	Manchester Standard	Social Standard
One	5	16	3·2	5	16	3·2	5	2	0·4	2	2	2
Two.. ..	141	442	3·1	282	442	1·6	141	130	0·9	22	53	26
Three ..	1,333	5,303	4·0	3,999	5,303	1·3	1,333	1,125	0·8	121	304	278
Four ..	4,058	16,059	4·0	16,232	16,059	1·0	4,058	3,147	0·8	102	743	798
Five.. ..	2,142	8,931	4·2	10,710	8,931	0·8	2,142	1,376	0·6	14	180	54
Six	712	3,014	4·2	4,272	3,014	0·7	712	372	0·5	—	51	18
Seven ..	256	1,212	4·7	1,792	1,212	0·7	256	159	0·6	—	16	6
Over Seven	231	1,318	5·7	—	—	—	231	192	0·8	2	10	5
Totals	8,878	36,295	4·09	37,292	34,977	0·94	8,878	6,503	0·73	263	1,359	1,187

Table D.

Housing Conditions—Year ended 31st December, 1931. In the Form required by the Minister of Health.

General Statistics.

Number of new houses completed during the year :—

(*a*) Total, including numbers given separately under (*b*)	2,517
(*b*) With State assistance under the Housing Acts—	
(i.) By the Local Authority	1,380
(ii.) By other bodies or persons	1,137

1. *Inspection of Dwelling-houses during the Year.*

(1) (*a*) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	31,239
(*b*) Number of inspections made for the purpose	91,342
(2) (*a*) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	8,878
(*b*) Number of inspections made for the purpose	26,831
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation ..	3,538
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	4,470

2. *Remedy of Defects during the Year without Service of Formal Notices.*

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers ..	3,302

3. *Action under Statutory Powers during the Year.*

(A) *Proceedings under Sections 17, 18, and 23 of the Housing Act, 1930.*

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	1,270
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—	
(*a*) By owners	969
(*b*) By local authority in default of owners.. ..	38

(B) *Proceedings under Public Health Acts.*

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	805
(2) Number of dwelling-houses in which defects were remedied after service of formal notices—	
(*a*) By owners	533
(*b*) By Local Authority in default of owners.. ..	248

(C) *Proceedings under Sections* 19 *and* 21 *of the Housing Act,* 1930.

(1) Number of dwelling-houses in respect of which demolition orders were made .. .. Nil

(2) Number of dwelling-houses demolished in pursuance of demolition orders.. .. .. Nil

(D) *Proceedings under Section* 20 *of the Housing Act,* 1930.

(1) Number of separate tenements or underground rooms in respect of which closing orders were made .. .. Nil

(2) Number of separate tenements or underground rooms in respect of which closing orders were determined, the tenement or room having been rendered fit.. .. .. Nil

(E) *Proceedings under Section* 3 *of the Housing Act,* 1925.

(1) Number of dwelling-houses in respect of which notices were served requiring repairs .. .. Nil

(2) Number of dwelling-houses which were rendered fit after service of formal notices :—

(*a*) By owners 97

(*b*) By Local Authority in default of owners .. 15

(3) Number of dwelling-houses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close .. .. Nil

(F) *Proceedings under Sections* 11, 14, *and* 15 *of the Housing Act,* 1925.

(1) Number of dwelling-houses in respect of which closing orders were made .. .. Nil

(2) Number of dwelling-houses in respect of which closing orders were determined, the dwelling-houses having been rendered fit .. .. Nil

(3) Number of dwelling-houses in respect of which demolition orders were made .. .. Nil

(4) Number of dwelling-houses demolished in pursuance of demolition orders .. .. Nil

Houses Let in Lodgings.

5,424 day and 35 night inspections were made.

405 notices were served for cleansing, provision of sinks, additional water-closets, etc. (See Table 5, page 240.)

43 infringements of the byelaws were reported to the Committee. (See Table 6, page 241.)

During the year 356 houses were registered and 784 discontinued.

There are 1,588 houses on the register.

Visits Paid in connection with Cases of Infectious Disease.

The following table summarises this work :—

Primary visits to infected houses	8,310
Subsequent visits to infected houses	18,311
Infectious cases investigated	8,639
Contacts visited	263
Rooms disinfected by Inspectors	4,574
Rooms disinfected by tenants	5,064

Rent Restriction Acts.

Seven applications were made by tenants for certificates as to the state of disrepair of their houses. Two applications were withdrawn and five certificates granted.

Van Dwellers.

These may be divided into two categories. The first type includes gypsies, travelling showmen, etc., who migrate from place to place camping on vacant plots of ground, with or without the consent of the owner. Their stay is of short duration usually, and the service of a copy of byelaws upon them and the land owner generally results in their departure.

The second category, which presents a different problem, is the outcome of the housing shortage. There are a few plots of ground in the City on which are a number of stationary vans. The occupants being unable to obtain houses at rents they can afford to pay, hire or purchase these vans. As a rule the vans and the sites conform to the byelaws governing tents, vans, and sheds—so far as concerns water supply, closet accommodation, etc.—but the conditions cannot be accepted as satisfactory having regard to the close proximity of one van to another and to the lack of adequate drainage and paving of the sites. It would be difficult, however, in come cases to prove an actionable nuisance.

During the year 245 inspections of vans were made and 125 copies of the byelaws served. Fifty-one cases of non-compliance were reported to the Committee, but in 42 cases the vans were removed before summonses could

be served. One man was fined £1 for neglecting to provide adequate water-closet accommodation.

Canal Boats.

The work in connection with the inspection and registration of canal boats has been carried on as in past years. There are four waterways in the City on which canal boats ply, viz. :—River Irwell, Ashton Canal, Bridgewater Canal, and Rochdale Canal.

1,607 inspections of boats were made, and they were found generally to be satisfactory. The only contraventions of the byelaws found were :—

Absence of registration certificates	3
Boats not properly marked with registration number ..	2
Boats overcrowded	1
Boats found dirty	2
Boats requiring painting	6
Boats requiring repairs	7
	21

In 15 of these cases the Inspector verbally cautioned the owners or masters for infringements, all of which were remedied.

Six statutory notices were served, five being complied with during the year.

One new boat was registered and eight were taken off the register.

There are now 313 boats registered, of which three are propelled by steam and one by motor. No case of infectious disease on canal boats was reported.

Municipal Hostels.

"Ashton House," the Hostel for Women, has 210 beds in separate cubicles. Sixty-three cubicles are let at 1s. per night or 6s. per week, the remainder at 10d. per night or 5s. per week.

The hostel was erected in 1910, and contains large dining-room and recreation hall, and is well appointed for its purpose. The shop offers a variety of foods at moderate prices.

60,932 persons have been accommodated during the financial year ended 31st March, 1932, an average of 167 per night.

"Walton House," the Hostel for Men, was erected in 1899, upon the site of a condemned area in Harrison Street, Ancoats. There are 463 cubicles, which are let at 1s. per night, or 6s. 6d. per week.

Dining, reading, smoke, and writing rooms are provided, also a barber's shop, and a room is set apart in which the lodgers can repair their boots. Food may be obtained at the shop and kitchen at reasonable prices, all crockery, etc., being provided without charge.

During the financial year ended 31st March, 1932, the hostel has been consistently full, and many applications for beds have had to be refused.

Closet Accommodation.

During the year 6 privies, 17 pail-closets, and 1 slopwater-closet have been converted to water-closets.

The numbers at the end of 1931 were :—

Water-closets	260,318			
Slopwater-closets ..	55	including	38	in Wythenshawe.
Pail-closets	1,070	,,	312	,,
Privies	274	,,	224	,,

Practically all the pail-closets and privies (with the exception of some in Wythenshawe) are situate where sewers are not available, or are in connection with property which has either been ordered to be closed or reported to the Committee.

Smoke Abatement and Atmospheric Pollution.

Smoke Abatement.

During the year a vigorous administration of the Smoke Clauses of the Public Health Act, 1875, has been maintained, and the Public Health (Smoke Abatement) Act, 1926, though beset with technical difficulties, has been put into operation as far as possible.

Control of nuisance due to smoke can only be effective if it be exercised over all urbanised areas adjacent to each other, and with this end in view Manchester is an active member of the Manchester and District Regional Smoke Abatement Committee, whose report appears on page 265.

There is an increasing demand on the part of the general public for a cleaner atmosphere.

Four Smoke Inspectors devote the whole of their time to this work, and their hours of duty are arranged so as to obtain the most extensive supervision possible of the smoke emissions from the industrial chimneys of the City.

Details of their work are given below. Included in notices served are four for "smoke other than black," and one statutory order was obtained prohibiting emission of smoke of this character.

Timed observations taken		954
Timed observations taken revealing smoke under two minutes	278	
Timed observations taken revealing smoke two minutes and over	241	
	—	519
Timed observations taken—Exempted chimneys (included above in two minutes and over)		37
Total amount of black smoke observed in minutes		1718·5
Average amount of black smoke observed in minutes—Per observation revealing black smoke		3·05
Observations taken of Locomotives on Railways (not included above)		4
Observations taken of locomotives on highways (not included above)		2
Special observations taken		10
Special reports made		88
Complaints received from all sources		114
Visits to works, etc., *re* smoke abatement		773
Cases reported to Committee		204
Cases cautioned or excused by Committee		35
Statutory Notices served		93
Magistrates' Orders to abate smoke nuisance obtained.. ..		17
Prosecutions for smoke nuisances		58
Prosecutions for burning rags near dwelling-house..		1
Summonses withdrawn or dismissed		3
Fined or ordered to pay costs		56
Total penalties and costs	£138 1 0	
Statutory Notices expiring without further action		*95
Statutory Orders lapsing for various reasons		9
Approximate number of chimneys		1,076

* Some of these notices were served in 1930.

Factories, Workshops, and Shops.

Factory and Workshops Act, 1901.

6,924 inspections have been made in connection with the cleanliness ventilation, overcrowding, and structural condition in workshops, and with the means of escape in case of fire and sanitary accommodation in factories and workshops.

In addition, 6,499 inspections of bakehouses have been made. (See report, page 217.)

Sixty-five complaints were received from, and 363 reports referred to, H.M. Inspector of Factories.

Workshops.

Sanitary defects, etc., were reported in 125 cases, and after action had been taken by the department the conditions were reported to be satisfactory in 124 cases and one case was outstanding at the end of the year.

Particulars of notices to remedy defects in, or to cleanse and limewash, workshops are as follows :—

Outstanding at commencement of year	16
Served during the year	28
Complied with during the year	43
Outstanding at end of year	1

Seven cases of neglect to remedy defects in workshops were reported to the Committee, but the work was carried out before legal proceedings were instituted.

Means of Escape in Case of Fire.

The requirements of the Factory and Workshops Act and of byelaws made thereunder relating to the provision and maintenance of means of escape in case of fire in factories and workshops have received attention, and all known cases of danger have been dealt with.

Statutory certificates have been issued on the authority of the Committee in connection with 19 buildings where the means of escape were satisfactory.

Notices to provide adequate means of escape in case of fire have been dealt with as follows :—

Outstanding at commencement of year	58
Served during the year	73
Complied with during the year	83
Outstanding at end of year	48

In 43 instances of means of escape not being maintained in accordance with the provisions of the Act, cautionary letters were sent, and the requirements complied with in 42 cases. Twenty-three reports of emergency windows not being marked were referred to the City Architect. Five infringements of the fire escape provisions of the Act were reported to the Committee, who ordered a caution in one case and summonses in four cases. The prosecutions resulted in one defendant being fined £1 and one ordered to pay 5s. costs. Two of the summonses were dismissed, as the defendant was fined on an alternative summons.

Sanitary Accommodation.

The sanitary requirements laid down in the Sanitary Accommodation Order, 1903, have been enforced under powers conferred on the Corporation by Local Acts.

All the factories and workshops have been dealt with from time to time, but changes in the tenancy of premises, or in the personnel of staffs employed, and alterations in the buildings necessitate constant supervision.

The accommodation was found insufficient, unsuitable, or defective in 18 factories and workshops, and remedied in 7 instances after service of notices. Eleven cases were outstanding at the end of the year.

In addition, the closet accommodation at numerous business premises, other than factories and workshops, was dealt with.

Outworkers.

The provisions of the Factory and Workshops Acts relating to outworkers have been observed. The object of these provisions is to ensure that the work is carried out under sanitary conditions and in premises free from infectious disease.

304 firms in the City employ 1,008 outworkers or contractors, of which 849 are in the City. The remainder are in the districts of other Local Authorities, to whom lists showing the names and addresses have been sent.

The two Female Inspectors have made 5,869 visits to houses in which home work is carried on. Fourteen of the houses were found to be dirty and were cleansed on verbal instruction.

Whilst constant visitation is necessary, it is satisfactory to note that there has been a great improvement in the general standard of cleanliness in the homes of outworkers.

Table 2.

Factories, Workshops, and Workplaces.

1.—*Inspections.*

Premises	Number of		Prosecutions
	Inspections	Written Notices	
Factories (including Factory Laundries) .. Workshops (including Workshop Laundries). Workplaces (other than Outworkers' Premises)	13,423	101	11
Total	13,423	101	11

2.—*Defects found in Factories, Workshops, and Workplaces.*

Particulars	Number of Defects			Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
Nuisances under the Public Health Acts :—				
Want of cleanliness	82	82	..	..
Want of ventilation	4	4	..	..
Overcrowding	..	..	..	..
Want of drainage of floors ..	1	1	..	..
Other Nuisances	38	37	7	..
Sanitary accommodation—				
Insufficient	7	3	..	..
Unsuitable or defective ..	11	4	..	..
Not separate for sexes ..	..	..	..	..
Offences under the Factory and Workshop Acts :—				
Illegal occupation of underground bakehouse (S. 101) ..	..	..	..	..
Other Offences :—				
Excluding offences relating to outwork and offences under the sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921	100	64	2	11
Total	243	195	9	11

Shops Acts.

Under the provisions of these Acts every shop must be closed for the serving of customers after 1-0 p.m. on one week-day in every week unless exemption has been given, or the times of closing have been varied by an Order made under the Shops Act, 1912.

Forty-two orders for exemption from compulsory closing or for "Fixing the Day" or for "Fixing the Closing Hour" for the several days of the week, are in operation in the City and affect a variety of trades or businesses.

On December 31st, 1931, there were 20,291 shops on the register.

17,548 visits have been made to shops to ensure the observation of the provisions of the Acts. 161 infringements were reported to the Committee, who ordered that the shopkeepers be cautioned in 141 cases and summoned in 20 cases. 19 of the prosecutions resulted in fines being imposed amounting to £8 10s. In one case the summons was withdrawn, the defendant being fined on an alternative summons.

General.

Drainage Work.

Defective drains are dealt with under the Public Health Acts and Local Acts. During the year notices were served for drainage work at 1,349 premises. Where this work and repairs to yard and passage surfaces is done by owners' contractors, the work is supervised by the district inspectors.

On owners' default or at owners' request this work is done by the department. During 1931 such work was effected in 792 cases at a cost of £9,802. The costs are recovered from the owners.

Drains reconstructed or repaired are subjected to the water test, and this test is also applied to the drains of all new buildings other than those on Corporation Housing Estates.

Under Section 31 of the Manchester Corporation (General Powers) Act, 1930, it is unlawful to repair and cover drains without giving due notice to the Corporation. During the year 12 instances were discovered where this had not been done. Eleven of the offenders exposed the drains for inspection and testing on request. One case was reported to the Committee, but facilities for inspecting and testing the drains were provided without issue of summons.

Sanitary Conveniences at Parks, Cemeteries, and Open Spaces.

These have been regularly inspected with a view to the maintenance of cleanliness and freedom from nuisance.

During the year a complete survey was made of sanitary conveniences at all the public parks, cemeteries, and open spaces, with special reference to :—

(*a*) Structural condition.
(*b*) Proximity to public street.
(*c*) Accessibility to public when park is closed.
(*d*) Washing facilities.

Fifty-nine parks and open spaces were visited by the male and female inspectors; and

304 water-closets
12 pail-closets
457 urinal stalls
} for males

316 water-closets
11 pail-closets
} for females

were inspected and reported upon. In a few instances the water-closets were of an old type, but the structural conditions were satisfactory generally In 13 instances defects of a nature readily remedied were found, and action taken in such cases.

In one case there is an entirely insanitary arrangement which should be demolished, and steps will be taken towards this end.

The few remaining pail-closets will receive attention as opportunity arises.

In every instance the premises were reported to be clean.

Most of the conveniences are situate at a considerable distance from a public thoroughfare. Practically all are inaccessible to the public when the parks are closed.

Washing facilities are provided for the public at five parks, and for bowlers and tennis players at 23 parks.

Offensive Trades.

Offensive trades within the City are controlled by the provisions of the Public Health Act, 1875, Public Health Acts Amendment Act, 1907, and Public Health Act, 1925.

When consent is given to the establishment of an offensive trade, it is subject to any requirements of the Medical Officer of Health being completed satisfactorily, and the registration is limited to such period as may be determined by the City Council.

The undermentioned offensive trades are carried on at 804 registered premises :—

Blood Boiling	1	Gut Scraping	2
Bone Boiling	2	Cattle Food Manufacturing	1
Soap Boiling	5	Poultry Meal Manufacturing	1
Tallow Melting	4	Pickle and Sauce Manufacturing	9
Tripe Boiling	7	Rag and Bone Dealing	33
Fish Curing	1	Rubber Paste or Solution Spreading	14
Fish Frying	709	Size Making	5
Oil Distilling	4	Manure Manufacturing	1
Tanning	5		

During the year 36 applications to establish offensive trades were formally received, 25 of which related to the trade of fish frying. three gut scraping, two fat melting, two rubber spreading, two rag and bone dealing, one soap boiling, and one pickle manufacturing.

The applications were acceded to in the case of six businesses of fish frying, two rubber spreading, two rag and bone dealing, one soap boiling, and one pickle manufacturing, a total of 12.

The remaining applications were refused on account of the unsuitability of the site or premises.

Seventeen offensive trades were established in the City in 1931, and 20 were discontinued, the particulars of which are shown below :—

Trade	*Established*	*Discontinued*
Poultry Food Manufacturing	..	1
Fish Frying	6	13
Gut Cleaning	..	1
Rubber Spreading	..	2
Pickle Manufacturing..	3	2
Rag and Bone Dealing	6	1
Soap Boiling	1	..
Tallow Melting	1	..
Totals	*17	20

* In seven cases the permission to establish was granted prior to 1931.

3,603 inspections of offensive trade premises were made by the District Inspectors. Of these 3,158 were of fish frying establishments, the utmost importance being attached to obtaining a high standard of cleanliness. Such premises generally were found to be clean. In 24 instances the occupiers were cautioned respecting unsatisfactory conditions, and on subsequent inspections the premises were reported to be satisfactory. The remaining 445 inspections of other offensive trades revealed a general freedom from nuisance.

Tips.

A strict supervision of the tips in the City has been maintained, and this is necessary to prevent indiscriminate tipping of refuse likely to become offensive, and to ensure that nuisances arising from the method of tipping or from the condition of the tip, are abated as soon as possible.

The unscientific methods of tipping in past years have resulted in the occurrence of outbreaks of fire on certain tips which give rise to considerable nuisance, and are most difficult to control or extinguish.

The disposal of house and trade refuse and street sweepings by means of tipping has considerably decreased during recent years. The Cleansing Department reported in the year 1921 that 153,273 tons of such refuse were tipped, whilst in 1931 the refuse tipped had been reduced to 47,765 tons, a decrease of 105,508 tons. A marked improvement has been effected at a number of the Corporation tips by the introduction of the modern method of controlled tipping.

Of the 62 tips in the City, 50 are in private ownership and 12 are Corporation tips. Tipping has been discontinued at seven private and two Corporation tips during the year.

734 inspections of tips have been made.

Corporation Tips.

At four of the tips, where untreated household refuse is still deposited, the controlled method of tipping is now in operation. At four tips, where destructor residue and street sweepings are deposited, the material tipped is covered and levelled as soon as possible after deposit.

At one tip, on shallow ground, street sweepings are raked to remove paper, etc., and the surface is then levelled, rolled, and seeded for grass.

At Mount Road Destructor Tip, fine ash only is deposited.

Portions of the tips at Bank Street, Clayton, and Clayton Vale Road, Newton Heath, have been on fire for several years. The attention of the Cleansing Department has been called repeatedly to the condition of these tips, and that Department has made efforts to extinguish the outbreaks of fire by covering with fine ash and sand, and rolling the surfaces where possible. The measures taken have effected improvement. With these exceptions, the conditions noted at the Corporation tips generally are as satisfactory as can be expected from the disposal of refuse by tipping.

Private Tips.

The matter deposited upon private tips is chiefly builders' refuse, and clay, etc., from excavations. Nuisance occasionally arises from offensive or combustible material deposited by unauthorised persons.

Conditions giving rise to nuisance were reported in five cases, and in all cases the nuisance was abated after letters had been sent to the owners.

In the autumn of 1930 the private tip at Randolph Street, Moston, which was formerly used for the deposit of waste from chemical works was found to be on fire. Notice was served on the owners, who afterwards signed an order for the Corporation to carry out the necessary work. After full consideration it was decided that the best method to be adopted was to cover the surface with a thick layer of sand. Hundreds of tons of sand have since been deposited and rammed on the tip. The tip has subsided in parts, and has had to be filled up in many places with sand. Subterranean combustion still continues, but considerable improvement in the control of the fire has been effected. The total cost of the work on this tip up to the end of the year was £282 8s. 9d., and the work of keeping the fire under control was still continuing.

Stables.

Systematic visits have been made to all stables with a view to the premises being kept free from nuisance and to ensure proper storage and frequent removal of manure.

7,053 inspections of stables were made during the year. Generally they were found to be well kept and the byelaws observed.

In two instances the structural conditions were so bad that statutory notices were served to discontinue keeping of animals, both of which were complied with.

In 21 other cases notices were served to execute drainage, repairs to buildings and surfaces, and provide manure receptacles. The work was carried out in seven instances, the stables discontinued as such in eight cases, and six remain in abeyance.

With the increase in motor transport it is not surprising that stables are decreasing in number. During the year 125 premises have been discontinued as stables, and 51 (including 19 in Wythenshawe) added to the register.

There are now 1,109 stables registered, accommodating 5,104 horses and 56 ponies and donkeys.

Exhumations.

Exhumations have, as required by regulation, been supervised by the Department.

The work of exhumation on the site of St. James's Church, George Street, City, was continued during 1931, when 16 bodies and a number of human bones were found, bringing the total number of bodies exhumed here to 271.

During excavations at Oldham Road Goods Yard 21 bodies and a quantity of human bones were discovered. These were reinterred at Southern Cemetery.

During the year seven other exhumations took place at City Cemeteries, the bodies being reinterred in other portions of the cemeteries.

Rag Flock Act, 1911.

The duties imposed by this statute have been carried out as in past years. There are no manufacturers of rag flock in the City. 222 visits were made to premises where rag flock was likely to be sold or used. Seventy-six samples were taken, five of which were below the standard of cleanliness prescribed by the Act. Two of the offenders were cautioned and three were prosecuted, resulting in two being fined 40s. and costs each. The remaining summons was withdrawn, but the manufacturer who supplied the flock was summoned by the defendant in accordance with section 3 of the Act, and fined 20s. and 42s. costs.

Fabrics (Misdescription) Act, 1913.

Thirty-nine visits were made under the provisions of this Act but no samples obtained, as in no case would the shopkeeper declare the material to be non-inflammable.

Poisons and Pharmacy Act, 1908.

Under this Act and the regulations made thereunder, 29 licences have been renewed and one new licence granted.

Table 3.

Showing Number of Inspections and Visits made during 1931.

Primary inspections of dwelling-houses under the Housing Act, 1925 ..	8,878
Subsequent inspections of dwelling-houses under the Housing Act, 1925..	17,953
Primary inspections of dwelling-houses in suggested Clearance or Improvement Areas	1,619
Subsequent inspections of dwelling-houses in suggested Clearance or Improvement Areas	116
Primary inspections of dwelling-houses under Public Health Acts., etc.	12,432
Subsequent inspections of dwelling-houses under Public Health Acts, etc.	23,723
Primary inspections of infected dwelling-houses	8,310
Subsequent Inspections of infected dwelling-houses	18,311
Houses let in lodgings	5,459
Tents, vans, and sheds	245
Homes of outworkers	5,869
Cellars	9
Canal boats	1,607
Bakehouses	6,499
Food preparation premises	1,888
Offensive trades	3,603
*Works	773
Schools	129
Tips	734
Stables	7,053
Sanitary accommodation at parks	872
Business premises	4,404
Factories and workshops	6,924
Shops	17,548
Wholesale Margarine dealers' premises	72
New buildings, to test drains, etc.	2,095
Drains tested by water	2,866
Miscellaneous	19,077

* By Smoke Inspectors.

Table 4.

Showing Work Done after Letter or Informal Notice has been Issued.

Nature of Work	Letters or Informal Notices Issued		Complied with*	
	Letters, etc.	Premises	Letters, etc.	Premises
General repairs to dwelling-houses..	1,403	3,034	1,622	3,302
Urgent defects at dwelling-houses which have been ordered to be closed or which are on the list for consideration of Unhealthy Dwellings Sub-Committee	1,623	3,414	1,348	2,898
Repairs to water-closets	1,826	2,428	1,214	1,639
Provision of ash-bins				
Means of escape in case of fire and repairs at factories and workshops	52	52	49	49
Abate nuisance at tips	8	..	8	..

* Includes some Notices served in 1930.

Where the work requested in letters or informal notices has not been carried out, statutory notices have since been issued.

Table 5.

Showing Statutory Notices Served and Complied with under Public Health, Housing, and Factory and Workshop Acts, and the various Local Acts and Bye-laws.

Work Specified	Number of Notices Served		* Number Complied With	
	Notices	Premises	Notices	Premises
Repairs to dwelling-houses	733	1,498	684	1,316
Provision, repair, and reconstruction of drains	925	1,349	966	1,428
Repairs to water-closets and provision of ash-bins	612	789	623	830
Provision or repair of downspouts and eaves-gutters	699	1,030	745	1,138
Paving, flagging, or repairing of yard and passage surfaces	1,484	3,853	1,520	4,002
Cleansing and lime-washing of dwelling-houses	101	101	95	97
To abate overcrowding at dwelling-houses	1	1	..	..
To discontinue using cellars as separate dwellings	5	2	5	2
Houses let in lodgings—To furnish particulars for registration	370	370	333	333
Houses let in lodgings—To cleanse and lime-wash	33	50	29	45
Houses let in lodgings—Provide additional W.C.'s and sinks	2	2	4	4
To comply with bye-laws *re* tents, vans, and sheds	125	114	129	120
Repairs to canal boats	6	..	5	..
Discontinue keeping animals	18	18	17	17
Repairs to stables and provision of manure-steads	21	21	15	15
Removal of horse manure	14	13	14	13
Removal of offensive accumulations	108	108	107	107
Cleansing, repair, and consolidation of private roadways	16	16	11	11
Provisions of adequate means of escape in case of fire at factories and workshops	73	74	83	97
To cleanse and lime-wash workshops	13	14	20	16
Remedy defects in workshops	15	16	23	24
Prevent the emission of smoke from chimneys of premises other than dwelling-houses	93	93	95	95

* Includes some Notices served in 1930.

TABLE 6.

Showing Offences Reported to the Committee, and Subsequent Action.

OFFENCE	COMMITTEE PROCEEDINGS						PROSECUTIONS							
	Cases Reported	Notices ordered to be Served	Ordered to be Summoned	Work done before Issue of Summons	Cautioned	Pending	Number Summoned	Number Fined	Ordered to Pay Costs Only	Magistrates' Orders Granted	Withdrawn	Dismissed	Amount of Fines £ s. d.	Amount of Costs £ s. d.
Neglecting to repair houses after notice	26	..	26	21	..	..	5	..	3	1	1	..	..	1 6 0
Neglecting to provide effective downspouts after notice	114	..	114	111	..	..	3	1	2	..	..	..	2 0 0	0 19 0
Neglecting to repair or provide privies, water-closets, etc., after notice	56	..	56	54	..	..	2	..	2	..	..	..	..	0 10 0
Neglecting to give notice re covering of drains	1	..	1	..	..	..	..	..	..	..	..	..	..	..
Neglecting to cleanse houses, bedding, etc., after notice	6	..	6	5	..	..	1	1	..	..	..	..	2 0 0	..
Neglecting to inscribe the names and addresses of the Owners and Medical Officer of Health in the Rent Book	3	..	3	3	..	..	..	..	..	..	..	..	..	..
Houses Let in Lodgings.—Dirty	8	..	8	8	..	..	..	..	..	..	..	..	..	..
Ditto Overcrowding or mixing of sexes	32	..	26	..	6	..	26	9	..	..	17	..	11 5 0	..
Ditto To furnish registration particulars	2	..	2	2	..	..	..	..	..	..	..	..	..	..
Neglecting to comply with Byelaws re Tents, Vans, Sheds, etc.	51	..	51	42	..	..	9	1	..	..	8	..	1 0 0	..
Neglecting to remove accumulations of offensive matter, etc., after notice	21	..	21	20	..	..	1	..	..	1	..	..	..	0 8 0
Neglecting to cleanse and repair roadway after notice	13	..	13	8	..	5	..	..	..	..	..	..	..	..
Neglecting to remove and discontinue keeping animals after notice	8	..	8	8	..	..	..	..	..	..	..	..	..	..
Neglecting to remedy defects in stables after notice	6	..	6	4	..	2	..	..	..	..	..	..	..	..
Allowing smoke to be emitted from chimneys, other than dwelling-houses	93	93	..	..	..	..	..	..	..	..	..	..	..	..
Allowing smoke to be emitted from chimneys, other than dwelling-houses after expiration of notice	17	..	17	..	..	..	17	..	..	17	..	..	..	6 16 0
Neglecting to comply with Magistrates' Order to abate nuisance from smoke	93	..	58	..	35	..	58	53	2	..	2	1	130 10 0	0 10 0
Burning rags within 100 yards of a dwelling-house	1	..	1	..	..	..	1	..	1	..	..	..	..	0 5 0
Neglecting to repair floors of bakehouses after service of notices	2	..	2	2	..	..	..	..	..	..	..	..	..	..
Unlawfully occupying premises as a bakehouse	1	..	1	..	..	..	1	..	1	..	..	..	..	0 5 0
Bakehouses in dirty condition.	6	..	6	..	..	..	6	4	..	..	2	..	3 10 0	..
Neglecting to maintain means of escape in case of fire at factories and workshops, in a satisfactory condition and free from obstruction.	5	..	4	..	1	..	4	1	1	..	..	2	1 0 0	0 5 0
Neglecting to repair or cleanse workshops after notice	7	..	7	7	..	..	..	..	..	..	..	..	..	..
Employing shop assistants on weekly-half-holiday	1	..	..	..	1	..	..	..	..	..	..	..	..	..
Did not exhibit the prescribed form correctly stating the shop assistants' half-holiday	156	..	19	..	137	..	19	18	..	..	1	..	8 0 0	..
Shop open in contravention of Closing Orders	1	..	..	..	1	..	..	..	..	..	..	..	..	..
Did not exhibit abstract as to young persons in shops	3	..	1	..	2	..	1	1	..	..	..	..	0 10 0	..
Infringement of Rag Flock Acts	5	..	3	..	2	..	3	2	..	..	1	..	4 0 0	0 10 6
Assaulting an Inspector in the execution of his duty	1	..	1	..	..	..	1	1	..	..	..	..	1 0 0	0 10 0
Obstructing an Inspector	1	..	1	..	..	..	1	1	..	..	..	..	0 5 0	..

Departmental References.

As a result of the co-operation between this and other departments of the Corporation, also H.M. Inspector of Factories, many sanitary defects were brought to our notice, and other matters outside the scope of action by this department were referred to the appropriate department.

References from	Department concerned	References to
841	Other Departments of the Corporation	4,712
65	H. M. Inspector of Factories	363

Student Sanitary Inspectors.

The Ministry of Health in 1926 requested Local Authorities to afford facilities to students for practical training in sanitary inspection. Arrangements to give effect to this request were approved by the City Council.

During the year 11 students have been given practical training by the Inspectorial Staff.

Table No. 7.

Showing the Amounts received for the Use of the Underground Conveniences, and the Working Expenses, etc., during the Financial Year ended 31st March, 1932.

Situation of Convenience	Cost of Construction	Wages and Clothing	Gas, Water, Repairs, etc.	Amount received for Use of Water-closets	Amount received for Use of Lavatories	Amount received for Left Parcels	Amount received from Sale of Sanitary Towels	Commission on Receipts from Weighing Machines	Total Receipts	Total Expenditure	Surplus	Deficit
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Albert Square (Males)	948 7 10	404 16 1	137 10 8	210 4 0	42 8 6	..	..	13 7 4	265 19 10	542 6 9	..	276 6 11
Victoria Buildings (Females)..	630 6 10	582 4 1	193 1 10	711 15 7	46 4 0	161 17 6	37 1 4	8 5 5	965 3 10	775 5 11	189 17 11	..
Piccadilly .. Females	887 12 9	347 12 3	180 10 4	876 18 4	49 3 10	75 9 4	21 5 0	7 19 2	1030 15 8	528 2 7	502 13 1	..
Piccadilly .. Males	1384 14 5	567 2 3	270 10 1	530 13 6	180 11 10	210 19 6	..	75 11 0	997 15 10	837 12 4	160 3 6	..
Market Place (Males)	1035 9 5	400 1 6	157 16 9	277 15 0	93 11 0	..	..	11 10 8	382 16 8	557 18 3	..	175 1 7
South Street (Males)	1615 7 6	373 17 10	120 4 1	67 10 9	23 0 2	..	..	5 5 9	95 16 8	494 1 11	..	398 5 3
h Great Bridgewater St. (Males).	1711 18 9	404 17 8	233 11 3	161 15 9	66 7 6	..	..	21 16 0	319 19 3	638 8 11	..	318 9 8
Victoria Street (Males)	2196 15 3	448 18 0	190 9 3	223 9 4	65 11 0	91 12 2	..	10 19 1	391 11 7	639 7 3	..	247 15 8
New Cross .. .. Females	1615 5 5	255 18 11	145 10 7	171 15 1	10 8 4	9 17 2	6 7 2	1 8 5	199 16 2	401 9 6	..	201 13 4
New Cross .. .. Males	1755 5 1	408 2 10	132 5 9	135 9 9	36 11 0	..	..	16 3 6	188 4 3	540 8 7	..	352 4 4
Stevenson Square Females	1605 16 11	253 14 1	147 9 9	331 17 6	10 8 10	17 2 6	13 14 4	2 10 0	375 13 2	401 3 10	..	25 10 8
Stevenson Square Males	1724 16 11	433 6 9	148 2 8	171 11 4	39 11 6	62 17 8	..	7 0 9	281 1 3	581 9 5	..	300 8 2
a Blackley (Females)	959 8 9	..	55 19 3	..	..	..	..	..	30 0 0	55 19 3	..	25 19 3
Blackley (Males)	1026 12 9	416 13 7	124 14 7	14 18 11	2 1 10	0 12 4	..	5 11 7	23 4 8	541 8 2	..	518 3 6
b Corporation Street (Males) ..	2364 10 9	400 0 6	116 7 2	50 12 9	15 0 4	9 17 0	..	3 19 0	98 19 1	516 7 8	..	417 8 7
Withington (Females)	267 14 6	258 7 1	53 18 0	75 8 2	0 18 4	16 5 9	3 6 2	0 14 8	96 13 1	312 5 1	..	215 12 0
Lloyd's Hotel, Chorlton-cum-Hardy	..	10 16 4	6 15 6	5 4 3	..	..	..	..	5 4 3	17 11 10	..	12 7 7
Shudehill (Males)	1631 9 3	376 6 2	159 12 9	97 7 3	18 1 0	16 18 6	..	2 5 11	134 12 8	535 18 11	..	401 6 3

(*Continued.*)

TABLE No. 7—*continued*

SITUATION OF CONVENIENCE		Cost of Construction	Wages and Clothing	Gas, Water, Repairs, etc.	Amount received for Use of Water-closets	Amount received for Use of Lavatories	Amount received for Left Parcels	Amount received from Sale of Sanitary Towels	Commission on Receipts from Weighing Machines	Total Receipts	Total Expenditure	Surplus	Deficit
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Longsight (Males)		260 14 1	66 3 8	19 1 6	31 4 7	..	..	..	..	31 4 7	85 5 2	..	54 0 7
Ardwick Green (Females) ..		605 10 7	257 11 5	55 0 0	68 7 9	10 1 2	3 0 0	3 19 6	0 15 3	86 3 8	312 11 5	..	226 7 9
cd Brooks's Bar		225 13 8	..	76 3 11	..	..	..	..	..	..	76 3 11	..	76 3 11
e Gorton Lane ..	Females	201 19 10	258 6 7	46 1 11	13 15 3	0 4 0	..	..	0 2 0	65 7 6	304 8 6	..	239 1 0
	Males	201 19 10	57 1 8	18 10 0	15 5 1	..	..	..	..	15 5 1	75 11 8	..	60 6 7
c Moston Lane ..	Females	230 14 6	28 10 10	31 11 5	3 11 5	..	..	..	..	3 11 5	60 2 3	..	56 10 10
	Males	230 14 6	28 10 10	21 1 4	..	..	..	..	..	..	49 12 2	..	49 12 2
c Southern Cemetery	Females	405 18 8	35 0 10	32 15 6	30 11 2	..	..	..	..	30 11 2	67 16 4	..	37 5 2
	Males	405 18 8	35 0 10	29 13 4	8 9 10	..	..	..	7 12 11	16 2 9	64 14 2	..	48 11 5
c Barlow Moor Road	Females	270 0 0	84 0 0	60 14 9	40 12 10	..	..	..	1 1 7	41 14 5	144 14 9	..	103 0 4
	Males	270 0 0	84 0 0	60 14 8	23 5 4	..	..	..	8 19 2	32 4 6	144 14 8	..	112 10 2
f Levenshulme (Females)		249 10 4	258 7 5	92 10 11	38 14 6	0 11 6	3 15 2	0 18 4	0 7 11	84 7 5	350 18 4	..	266 10 11
Levenshulme (Males)		249 10 3	66 3 8	33 16 5	19 3 6	..	..	..	6 1 10	25 5 4	100 0 1	..	74 14 9
c Gorton Town Hall (Females)		550 0 0	167 14 3	31 4 9	55 3 0	0 14 0	..	0 8 4	2 5 9	58 11 1	198 19 0	..	140 7 11
c Gorton Town Hall (Males) ..		820 0 0	28 10 10	16 19 7	33 14 4	..	..	..	..	33 14 4	45 10 5	..	11 16 1
North Road (Females)		521 4 9	32 0 6	18 1 5	6 5 0	..	..	..	0 11 1	6 16 1	50 1 11	..	43 5 10
Queen's Road ..	Females	555 0 11	32 0 6	13 14 4	18 10 9	..	..	..	1 8 0	19 18 9	45 14 10	..	25 16 1
	Males	555 0 11	19 0 6	34 5 10	16 10 11	..	..	..	7 18 9	24 9 8	53 6 4	..	28 16 8
West Point ..	Females	644 6 10	28 15 7	15 2 6	26 1 4	..	..	..	1 0 4	27 1 8	43 18 1	..	16 16 5
	Males	644 6 9	28 15 7	18 19 0	11 11 9	..	..	..	6 2 3	17 14 0	47 14 7	..	30 0 7
g Kitchen Bank		776 7 4	258 6 0	49 5 6	31 16 9	0 13 8	0 10 10	0 18 2	0 15 5	49 0 10	307 11 6	..	258 10 8

(*Continued*).

TABLE No. 7.—*continued*

SITUATION OF CONVENIENCE	Cost of Construction	Wages and Clothing	Gas, Water, Repairs, etc.	Amount received for Use of Water-closets	Amount received for Use of Lavatories	Amount received for Left Parcels	Amount received from Sale of Sanitary Towels	Commission on Receipts from Weighing Machines	Total Receipts	Total Expenditure	Surplus	Deficit
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Dean Lane .. {Females / Males}	1121 0 0	258 6 3 19 0 6	34 0 9 5 11 11	30 0 7 8 2 1	0 11 2 ..	0 11 0 ..	0 13 10 ..	1 5 3 ..	33 1 10 8 2 1	292 7 0 24 12 5	..	259 5 2 16 10 4
Wellington Hotel, Didsbury (Males)	86 4 1	10 16 4	5 3 7	6 7 6	..	..	..	..	6 7 6	15 19 11	..	9 12 5
Cheetham .. .. {Females / Males}	1573 2 1	257 12 3 406 0 4	123 15 4 117 19 6	22 4 5 9 7 2	0 8 8 1 5 6	..	1 2 10 ..	0 4 10 1 19 3	24 0 9 12 11 11	381 7 7 523 19 10	..	357 6 10 511 7 11
Knott Mill (Females)	861 2 0	257 13 0	47 1 5	21 14 6	0 15 8	..	0 7 6	..	22 17 8	304 14 5	..	281 16 9
Northenden .. {Females / Males}	545 0 0	31 12 9 31 2 9	48 5 2 32 9 4	25 9 9 12 0 2	..	..	..	..	25 9 9 13 19 6	79 17 11 63 12 1	..	54 8 2 49 12 7
Alexandra Park {Females / Males}	1560 2 1	231 7 10 22 9 6	42 3 3 12 10 6	29 14 7 17 1 3	0 10 8 ..	..	0 7 0 ..	1 19 4 ..	30 12 3 17 1 3	273 11 1 35 0 0	..	242 18 10 17 18 9
Butler Street .. {Females / Males}	2392 10 8	104 9 1 159 8 1	26 13 4 23 7 3	7 4 3 4 14 10	0 1 8 0 15 10	..	..	..	7 5 11 8 9 10	131 2 5 182 15 4	..	123 16 6 174 5 6
Midway Hotel, Longsight (Males)	247 2 4	5 12 11	15 9 11	2 14 5	..	..	..	2 19 2	2 14 5	21 2 10	..	18 8 5
Openshaw .. .. {Females / Males}	1255 8 1	27 3 3 7 6 2	9 15 9 0 12 1	1 13 4 1 11 1	0 0 8 ..	..	..	..	1 14 0 1 11 1	36 19 0 7 18 3	..	35 5 0 6 7 2
j Seymour Grove, Chorlton-cum-H. {Females / Males}	729 9 6	4 9 5 0 4 2	5 4 9 0 8 4	0 1 7 0 0 8	..	..	..	..	0 1 7 0 0 8	9 14 2 0 12 6	..	9 12 7 0 11 10
Proportion of Cost of Maintenance of Joint Tram Shelters, etc., received from Transport Department ..	..	..	..	..	..	..	..	..	183 13 9	..	183 13 9	..
TOTALS	42607 6 4	10031 12 0	3900 11 0	4807 4 6	716 13 2	681 6 5	90 9 6	247 18 4	6952 7 11	13932 3 0	1036 8 3	8016 3 4

a This Convenience was let with the shop at a rental of £30 per annum and rates, the Public Health Committee undertaking to pay for gas, water, and electricity.
b Tramways Committee pay 7s. 6d. per week for privileges extended to Tramways employees at this Convenience.
c Tramways Committee pay half cost of construction (except Barlow Moor Road Conveniences, the amount stated being the cost apportioned to the Public Health Committee) and working expenses, and receive half receipts.
d Conveniences demolished January 19th, 1931—Road widening scheme
e Includes £51 6s. 3d. rent, etc., received for portion of premises.
f Includes £40 rent, etc., received for portion of premises.
g Includes £14 6s. rent, etc., received for portion of premises.
h Includes £70 received for repairing damages, etc., to Conveniences.
j Stretford U. D. Council pay half cost of construction and maintenance and receive half receipts.

Public Conveniences.

Public conveniences owned by the City number 146. These provide accommodation as follows:—

Males ..	Urinals, W.C., washing, and parcels accommodation ..	6
	Urinals, W.C., and washing accommodation	7
	Urinals and W.C. accommodation	21
	Urinals	84
Females ..	W.C., washing, and parcels accommodation	9
	W.C. and washing accommodation	8
	W.C. accommodation	11

The receipts for the year amounted to £6,952.

SPECIAL INSPECTORS' REPORT.

Visits *re* Public Health (Meat) Regulations, 1924	2,789
,, ,, Other Food Shops	34
,, ,, Specifications of Work required at Meat Shops ..	14
,, ,, Housing	175
,, ,, Food Poisoning	18
,, ,, Export of Old Clothes, Washed Mutton Cloths, and Rags	57
,, ,, Infectious Diseases	3
,, ,, Nuisances	21
,, ,, Vermin	27
,, ,, Tips	10
,, ,, Public Conveniences	28
,, ,, Miscellaneous Complaints	43
,, ,, School Clinics	2
Specimens submitted for examination at the Public Health Laboratory:—	
Food Poisoning	8
Housing Statistics (Days)	409
Health Exhibitions ,, ...	47

REPORT OF WORK DONE UNDER THE RATS AND MICE (DESTRUCTION) ACT, 1919.

Section I. of the Rats and Mice (Destruction) Act, 1919, renders it obligatory upon the occupier of any land or premises, not only to destroy rats and mice, but also to take such steps as are necessary and reasonably practicable for preventing such land or premises from becoming infested with rats and mice. In default the occupier is liable to penalties.

The principal features of the year's work are :—

(*a*) The increased number of examinations of undermined surfaces.

(*b*) The large number of premises at which work was in progress at the end of the year.

(*c*) The small percentage of premises at which reinfestation has occurred over a five year period.

Investigation.

Complaints of the presence of rats received from occupiers, sanitary inspectors, health visitors, police, and the general public are investigated by the Rat Officers.

The premises complained of, and, if necessary, adjacent premises, are inspected to ascertain the extent of, and, if possible, the source of infestation. Primary inspections have been made at 2,926 premises during the year, and of these, 2,706 were found to be infested. Of the infested premises, 30 per cent. showed infestation of the interior of the building and 70 per cent. infestation of yards, passages, land, and gardens only. The conditions found at each type of premises are shown in Table I.

Causes of Infestation.

Infestation was found to be directly due to or associated with defective or disused drains or sewers in 68 per cent. of all rat-infested premises visited ; in 40 per cent. of premises affected by interior infestation ; and in 80 per cent. of premises where infestation was confined to yards and passages only. In only 0·28 per cent. of the infested premises was the cause of infestation not determined.

A classification of the cause of infestation will be found in Table II.

Nature of Business carried on at Infested Premises.

During the year, primary inspections were made at 737 business premises affected by rat infestation. Of this number 218, or 30 per cent., were premises at which food was prepared, stored, or sold ; and 383, or 51 per cent., were factories, workshops, warehouses, and places in which the attraction to rats was the scrap food and food paper wrappings thrown about the floors or left unprotected about the premises.

Details of the nature of premises infested will be found in Table III.

Repressive Measures.

Occupiers of rat-infested premises are advised by the Rat Officers of the remedial and preventive measures which appear to be necessary. Each case is treated on its merits, and the advice given may include :—

(*a*) Methods to employ for the destruction of rats.

(*b*) Examination of floor spaces or undermined surfaces and the tracing of rat burrows.

(*c*) Elimination of harbouring spaces.

(*d*) Removal of accumulations of lumber and rubbish.

(*e*) Protection of food stocks and food scraps.

(*f*) Rat proofing of the premises.

(*g*) Arrangements to secure concerted action in all adjacent infested premises.

(*h*) The employment of a rat-catcher to work in conjunction with the contractor carrying out the proofing of the premises.

Appropriate methods applicable to the specific type of infestation, for carrying out organised rat destruction are suggested, and, where necessary, repeated revisits are made to ensure that the measures are being carried out in a sufficient manner. The Rat Officers have made 3,005 such revisits during the progress of repressive measures.

Destruction.

Professional rat-catchers have been employed at 257 premises, and have certified to the destruction by them of 10,357 rats in the City area during the year 1931. The gassing machines have been used twice during this period.

The various Corporation departments have co-operated in these repressive measures, and baits totalling 56,759 have been laid, chiefly in the sewers by the City Engineer's Department. 35,455 of these were taken, and the Rivers Department have stated that from observation of the screening machinery more dead rats than usual have arrived at the works. By means other than poison, 4,530 rats were destroyed.

Rat Proofing.

The condition of many of the older buildings in the City is such as to allow easy means of ingress and harbourage for rats, and in some cases effectively to rat-proof the building would necessitate reconstruction.

The attention of the occupiers of these old buildings is directed to visible defects, such as short or gnawed doors, open pipe tracks, unguarded windows and ventilators, and holes in the structure,

Measures Carried Out.

During the year, 2,055 premises have been cleared of rats.

At the end of the year, work was in progress by owners and occupiers at 1,003 premises, and by rat-catchers at 176 premises, making a total of 1,179 premises.

Particulars of the measures carried out during the year are detailed in Table IV.

Recurrence of Infestation.

In the period 1926 to 1930 inclusive, measures for the repression of rats have been carried out in connection with 8,468 premises. At 8,040 premises (95 per cent.) there has been no complaint of re-infestation.

Reinfestation has occurred in connection with 428 premises in this period, and of these, 291 have been dealt with and again reported clear, while in the remainder, repressive measures are still in hand.

The efficiency of the work done in each year during the period 1926 to 1930 is set out in Table V.

Collective Action.

The importance of concerted action by occupiers of adjacent infested premises has been emphasised and, where necessary, co-operative action has been secured for the destruction of rats and mice. *In no case was it found necessary either to serve statutory notice or to take legal proceedings.*

Tracing of Burrows in Relation to Drainage Infestation.

In the course of the 263 examinations made by the City Engineer's Department, owners and occupiers, Drainage and Sanitary Sections, 425 defects were revealed in drains or sewers which in the majority of cases proved to be the cause of infestation.

The conditions found, and the action taken in connection with this portion of the work, is shown in Table VI.

National Rat Week, 1931.

In compliance with a memorandum from the Ministry of Agriculture and Fisheries, a special effort was made in National Rat Week, November 2nd to 7th, 1931.

Rat Week Propaganda.

The object was advertised extensively in the local press and on a large electric sign in the City. Two hundred posters were exhibited on City hoardings, and 1,100 letters were sent to farmers and occupiers of other premises peculiarly liable to infestation by reason of the nature of the business carried on. All Corporation Departments were invited to co-operate.

Work directly arising from Rat Week Propaganda.

	National Rat Week, 1931	Weekly Average (excluding National Rat Week)
Number of complaints received	45	7·5
Premises visited in connection with complaints In Rat Week 173		
Subsequent to Rat Week.. .. 117		
	290	53
Revisits to other premises known to be infested	78	60

Conditions Found.

	Business Premises	Dwelling-houses	Totals
Interior infestation	68	15	83
Exterior infestation	65	66	131
Mice only	5	52	57
No evidence	5	14	19
	143	147	290

Advice was given in all cases by letter or verbally by the visiting officer. Arrangements were made at 11 premises for the employment of rat-catcher.

Repression Work by Corporation Departments during Rat Week.

The City Engineer's, the Rivers, Markets, Cleansing, and Parks, etc., Departments carried out special measures, which included the laying of 10,042 poison baits in the sewers, and of this number, 6,288 were known to have been taken.

Table I.

Summary of Conditions Reported and Number of Premises Primarily Visited during the Year 1931.

Interior Infestation			Exterior Infestation		No evidence of Infestation	
Business Premises	Dwelling-houses	Mice only	Business Premises	Dwelling-houses	Business Premises	Dwelling-houses
301	278	248	436	1,443	49	171
	827		1,879		220	
			Total .. 2,926			

Table II.

Classification of Causes of Infestation in Premises Primarily Visited in 1931.

Cause of Infestation	Interior Infestation		Exterior Infestation		Totals	Per-centage
	Business Premises	Dwelling-houses	Business Premises	Dwelling-houses		
)irectly due to defective or disused drains or sewers	96	129	230	1,085	1,540	62·70
.ssociated with defective or disused drains or sewers	17	56	17	48	138	5·60
ature of business carried on in premises or vicinity	85	4	95	39	223	9·07
icinity of open or culverted water-courses	17	3	14	12	46	1·90
eglect in the protection of food scraps and wrappings	45	35	54	219	353	14·37
emolition or building operations in vicinity	15	11	15	13	54	2·11
ips and refuse dumps	..	2	4	16	22	0.90
ilapidated premises	26	31	7	11	75	3·07
ause not determined	..	7	..	..	7	0·28
	301	278	436	1,443	2,458	100·00

Analysis of Drainage Infestation.

Infestation	Business Premises		Dwelling-houses		Totals
	Interior	Exterior	Interior	Exterior	
tal number of primary investigations into rat infestation = 100 per cent. ..	301	278	436	1,443	2,458
rectly due to defective or disused drains or sewers	96	230	129	1,085	1,540
sociated with defective or disused drains or sewers	17	17	56	48	138
tal number of premises affected by drainage infestation	113	247	185	1,133	1,678
rcentage of drainage infestation in each group..	37·54	88·85	42·5	78·52	68·30

Table III.

Nature of Premises Infested during the Year 1931.

Particulars of Premises	Interior		Confined to Yards, Passages, and Gardens	Totals
	Rats	Mice	Rats	
Restaurants and cafes	15	..	2	17
Butchers, greengrocers, grocers, bakers, confectioners, tripe shops, fried fish shops, licensed premises, sweet shops, dairies and ice-cream makers, and provision warehouses	66	16	135	217
Slaughter-houses, piggeries, triperies, tips, marine stores, stables	21	..	14	35
Farms, parks, allotments, and land	5	..	40	45
New building estates, builder's stores, and garages	21	..	42	63
Factories and Workshops. — Stationery, clothing, laundry, furniture, joinery, printing, upholstery, engineering, leather, and miscellaneous	85	2	86	173
Warehouses. — Clothing, leather, paper, hardware, furriers, cloth, and miscellaneous	9	4	16	29
Shops.—Outfitters, drapers, boots, hairdressers, tobacconists, tailors, stationery, hardware, chemists, fancy goods, and miscellaneous	36	7	59	102
Institutions.—Churches, hospitals, schools, club houses, and nursing homes	5	3	2	10
Public Halls.—Cinemas, etc.	1	2	1	4
Offices	18	3	31	52
Unoccupied premises	19	..	8	27
Dwelling-houses	278	211	1,443	1,932
Totals	579	248	1,879	2,706

Table IV.

Rat Destruction and Preventive Measures carried out during the Year 1931.

Measures carried out	By whom carried out	Business Premises	Dwelling-houses	Totals
Prevention only	Occupier	5	12	17
Destruction only	Occupier	31	64	95
	Rat-catcher	2	4	6
Destruction, Proofing, and Prevention	Occupier	86	347	433
	Owner	2	8	10
	Rat catcher	19	1	20
	Destruction by occupier, proofing by owner	10	37	47
	Destruction by rat-catcher, proofing by occupier	16	11	27
	Destruction by rat-catcher, proofing by owner	9	19	28
	Destruction by occupier, sewers by City Engineer	151	1,006	1,157
	Destruction by occupier, drains by owner	39	176	215
	Totals	370	1,685	2,055

Table V.

Percentage Efficiency at the End of the Year 1931 of the Work done in each Year during the Period 1926 to 1930.

Particulars	Year				
	1926	1927	1928	1929	1930
Number of premises reported clear of rats in the years	786	1,329	1,670	2,202	2,481
Premises where reinfestation has occurred and has been dealt with subsequently. Again reported clear of rats	83	94	93	17	4
Reinfested premises at which repressive measures are still in hand	24	40	59	13	1
Premises dealt with at which there is no further complaint of the presence of rats	762	1,289	1,611	2,189	2,480
Percentage of efficiency of the work done at the end of the year 1931	96·94	96·99	96·46	99·40	99 95

Table VI.

Tracing of Rat Burrows in relation to Drainage Infestation.

Number of examinations made by ..	*City Engineer*	*Owners and Occupiers*	*Drainage Section*	*Sanitary Section*	Total
	147	93	20	3	263
Conditions found or action taken.					
Defective sewers requiring reconstruction ..	7	..	1	..	8
Sewers reconstructed	4	..	1	..	5
Minor defects in sewers repaired	123	..	11	..	134
Disused privy midden drains removed ..	50	2	6	..	58
Other disused drains removed, dealt with, or referred to Drainage Section	32	32	36	4	104
Outlet drains repaired	16	..	18	..	34
Defective drains remedied by owners or referred to Sanitary Section	8	46	3	14	71
Street drain inlets repaired	11	..	..	..	11
Outward rat burrows consolidated	24	4	..	..	28
Surface rat burrows consolidated	19	29	..	..	48
Undermining due to other causes than rats.	5	1	..	..	6
Totals	299	114	76	18	507

Other Drainage Examinations by Sanitary Section made during the Year at the instance of the Rat Section.

Premises examined in consequence of suspected drainage infestation	53
Premises at which drainage work required under notice has been completed during the year	72
Premises at which drainage work required by notice was in progress at the end of the year	24
Notices to repair defective drains served or in course of preparation	2

PARTICULARS RELATING TO THE OPERATIONS OF THE CLEANSING DEPARTMENT.

The Medical Officer of Health is indebted to Mr. Jones, Director of Public Cleansing, for the following particulars relating to the operations of the Cleansing Department during the year ending 31st March, 1931.

The administration of the Cleansing Department of the City of Manchester is under the supervision of a Director, with a staff of about 76 officials and 1,908 workmen.

For Departmental purposes the cleansing of the city is divided into a House and Trade Refuse Section and a Street Cleansing Section.

The work of the House and Trade Refuse Section includes the emptying of old privies and pail closets and the collection and disposal of household refuse, and garbage from the Public Markets; whilst the Street Cleansing section deals principally with the cleansing of the streets and disposal of refuse collected therefrom.

The extent of the Department's operations may be gathered from the following general statistics:—

The net expenditure of the Department, including loan charges, amounted to:—

	£	s.	d.
House and Trade Refuse Section	236,176	10	5
Street Cleansing Section	151,182	17	1
	£387,359	7	6

House and Trade Refuse Section.

There are within the City 181,152 dwelling-houses, 3,913 lock-up shops, 15,499 mills, warehouses and offices, and 10,975 miscellaneous premises. From these premises during the past year there were collected and disposed of 177,914 tons of ashes, 3,873 tons of nightsoil and pail contents, 24,506 tons of warehouse and trade refuse, 5,671 tons of slaughter-house refuse, 2,137 tons of stable manure, 954 tons of fish refuse, 4,637 tons of market garbage, and 585 tons of waste paper.

Previous to 1872 the midden-privy system was in operation, but the Corporation then decided upon the introduction of what is known as the pail-closet system, the scarcity of water preventing the adopting of the water-carriage method. Since the water difficulty has been solved the conversion of pail-closets into water-closets has been proceeded with, and is rapidly nearing completion. There are now only 59 privies and 889 pail-closets within the City.

In later years it was decided to replace the wooden ash-boxes by galvanized iron receptacles with lids, and there are now 198,720 of the latter.

TABLE SHOWING NUMBERS OF PRIVIES, PAILS, ASH-BOXES, AND ASH-BINS FOR PERIOD 1912-1931.

Year	No. of Privies (with Ashpits)	No. of Pails	No. of Wooden Ash-boxes	No. of Galvanized Iron Ash-bins with Lids
1912	1,982	10,000	50,421	88,762
1913	292	3,850	41,645	101,239
1914	218	2,128	31,875	112,843
1915	157	1,710	24,677	121,191
1916*	236	1,671	16,653	142,107
1917	230	1,665	12,469	146,246
1918	230	1,633	11,230	147,616
1919	217	1,327	8,011	151,609
1920	217	1,326	4,827	153,962
1921	217	1,322	2,181	156,587
1922	217	1,310	1,681	160,347
1923	217	1,300	1,440	165,165
1924	217	1,244	1,140	168,905
1925	217	1,229	940	171,184
1926	217	1,225	716	183,930
1927	80	1,148	520	187,242
1928	73	1,127	—	191,814
1929	73	957	—	195,619
1930	60	917	—	197,631
1931	59	889	—	198,720

* District of Withington incorporated.

The removal of domestic refuse takes place once a week.

The fleet of barges for removal of refuse is now 13.

Nineteen motor and 40 horse-sweeping machines are employed on the streets, a total of 43,775 loads of sweepings, litter, etc., being collected.

General.

The total weight of material dealt with by the House and Trade Refuse and Street Cleansing Sections of the Department during the year was 264,052 tons, being equal to, say, 875 tons per working day.

TABLE SHOWING THE DISPOSAL OF MATERIAL COLLECTED TWELVE MONTHS ENDING MARCH, 1931.

House and Trade Refuse.

	Tons
Incineration	123,408
Separation Plant Treatment	21,504
Boat to Estates	28,689
Rail to Estates	7,125
Sales to Farmers	2,467
Concentrated Manure Manufacture	1,676
Old Tins, Metals, etc. (hand picked)	1,291
Controlled Tipping	33,694
Meat Products	423
	220,277

Street Cleansing.

	Loads
Incineration	300
Boat to Estates	11,987
Rail to Estate	11,723
Controlled Tipping	14,071
Sales to Farmers	380
Drainage	5,314
	43,775

The amount of refuse taken to the Carrington and Chat Moss Estates since they were purchased by the Corporation is as follows:—

Chat Moss Estate	2,204,614 tons	in 33 years.
Carrington Estate	1,218,100 „	43 „

The estates are divided among 58 tenants, occupying an aerodrome, farmsteads, and nurseries.

The Corporation erected the farmsteads, and provision was made for an adequate supply of town's water. There are 2 railway sidings on the estate and 2 wharves on the Ship Canal. The market value of the estates has considerably increased since their purchase, chiefly through cultivation and owing to the proximity of the Manchester Ship Canal.

SPECIAL REPORTS.

ANNUAL REPORT OF THE MANCHESTER COMMITTEE ON CANCER.

The Manchester Committee on Cancer has continued to investigate the causes of mule spinners' cancer, and especially the cancer-producing properties of mineral oils and the possibility of removing harmful compounds from them in such a manner that they can be used commercially without increasing their cost or diminishing their lubricating qualities.

The research work is carried out, as before, at the University, by a Joint Committee, consisting of representatives of the Manchester Committee on Cancer and of the University.

The scientific sub-committee meets every two months to hear reports of the work which is being done and to discuss the most advantageous lines of development of the research work.

As the scientific report shows, some facts of practical use have been ascertained during the year's work and communicated to those interested in the cotton and oil industries.

The Anglo-Persian, Anglo-American, and Shell-Mex Oil Companies have made a second contribution of £1,000 to the funds of the Manchester Committee on Cancer in aid of the research work. Their co-operation is of valuable assistance to the scientific staff, and the Committee wishes to take this opportunity of thanking the Companies for their generous support.

Scientific Report.

1. *Mineral lubricating oils.*

Further investigations on the cancer-producing ability of mineral oils have shown that if the locality from which an oil has originated is known with certainty, its power to excite the formation of cancer can often be foreseen with a moderate degree of accuracy before subjecting it to laboratory tests. Oils from some areas give much more consistent results than oils from other areas, an important factor in the variations being probably the methods adopted commercially in the preparation and distribution of the oils. The length of time that any oil is in contact with the skin of an animal is of vital significance, for, by knowing this, two oils may be compared as to the number of tumours induced in a given period of time, or compared as to the length of time required to induce a given number of tumours. Lengthy experiments have shown that all mineral oils, other than white oils, must meanwhile be viewed with suspicion as regards their potential ability to induce cancer if kept continually, and for long enough, in contact with the skin.

Crude mineral oils. We have obtained further evidence that the crude oils are less active carcinogenically than the refined lubricating oils prepared from them. This, as we have remarked previously, may be partly due to the removal of the low boiling spirits; but we have also reason to believe that crude oils especially contain substances which may, to a certain extent, neutralise the harmful effect of the carcinogenic compounds. These results, if subsequently confirmed, will explain why some operatives, such as the oilers and greasers of cotton mills, do not show the high incidence of cancer found among mule-spinners.

White mineral oils. The white oils tested (disregarding the boiling range) have proved to be non-carcinogenic provided they do not change in colour on exposure to the light and air. Some of the so-called spirits (petrol, etc.) which are derived from mineral oils tend to become yellow on exposure, and such oils must meanwhile be viewed with suspicion. There is a good deal of evidence to show that hydrocarbon mineral oils, when ingested by animals over a long period of time, lead to a peculiar type of fatty infiltration of the liver, there being subsequently some degree of necrosis of the liver cells proper. This phenomenon has in no instance been observed when using gas tars or synthetic tars in the place of mineral oils, and of course it has not been observed when using saponifiable oils. Further experiments on the most highly refined mineral oils obtainable are being undertaken.

2. *The protective action of animal and vegetable oils.*

The addition of a small quantity of saponifiable oil to mineral lubricating oils, which was mentioned in a former report, has consistently yielded favourable results by reducing, often to a marked degree, the number of experimental tumours induced by a given oil. No oil has, so far, been found which surpasses lanolin in this respect. A feature of the action of lanolin is the remarkable manner in which it preserves the skin smooth and soft when mixed with a mineral oil which would, by itself, naturally give rise to roughness, and eventually cracking, of the skin, etc. In the laboratory the efficacy of lanolin was shown to be even greater if it was rubbed over the part exposed to the mineral oil instead of being mixed with the latter. These observations suggested that lanolin would be useful as a protective measure against the dermatitis to which workers exposed to the active dangers of mineral oils are liable, and reports have been received from the medical officer of an oil company which substituted lanolin for the castor oil previously used as such a protective for the workman, to the effect that a marked benefit resulted from the change to the lanolin. The latest information is that all the younger workers are now

entirely free from any skin eruptions, but that improvement is not so noticeable among the older men, although their condition shows a certain amount of amelioration. The fact that those who have been in contact with the mineral oil for a relatively short time respond to the treatment better than those who have been in contact for a longer period corroborates the results obtained in laboratory experiments that lanolin, rigourosly applied to the skin of animals, will prevent mineral oils from causing tumours if it be applied early; that it will hardly effect the yield of tumours if applied late; that it appears to have no influence at all on the march of a benign tumour to malignancy.

3. *A carcinogenic pure compound from tars.*

Further observations have been made with chrysene, obtained from gas tars and synthetic tars which were found several years ago to be capable of inducing cancer when painted on the skin. A difficulty in working with chrysene, the first single hydrocarbon shown to be carcinogenic, has been its doubtful state of purity and its great lack of solubility, but Dr. Bottomley has attempted to overcome this by the formation of soluble salts. Sulphonates of chrysene and synthetic tar were inactive when applied in watery solution to the skin. This was only to be expected, but it is quite possible that they will be found to be active when given internally in this way.

Oleic Acid. This acid is widely distributed through the animal and vegetable kingdom, and it is very important to remember that alone, when applied to the skin, it may lead to the production of a benign growth. We have never observed a malignant growth to supervene as a result of oleic acid applications, but it is a significant fact that if chrysene is applied as a paste mixed with oleic acid instead of as a paste mixed with liquid paraffin the yield of malignant tumours presumably induced by the chrysene is greatly augmented. Linoleic acid, another unsaturated fatty acid, will also on occasions induce the development of a benign tumour, and we are testing the effect of a chrysene-linoleic acid paste.

4. *The estimation of the carcinogenicity of mineral oils by chemical and physical methods.*

The standard test for finding the cancer-producing activity of mineral oils is carried out with animals, but if reliable ones could be found, chemical and physical tests would, for many reasons, be far more convenient. This has led to an attempt to measure the activity of the oils without the help of animals, and a number of oil samples of known carcinogenic potency have been examined as to their chemical and physical properties. Special attention has been paid to gravity, viscosity, fluorescence, refractive index, iodine value, and

permanganate value, and a certain amount of information has been obtained which, it is hoped, will be supplemented later by further investigations in other directions. These estimations have not only proved of value for correlating with the animal results, but also they have served to check the equality of trade samples and thereby in some instances have explained the irregularities in the results obtained which were otherwise inexplicable.

We have to thank our former collaborator, Dr. Fulton, for having come to Manchester specially to carry out the tests relating to the permanganate value of the oils which he was unable to perform with the iodine values determined last year.

5. *Duration of employment in relation to spinners' cancer.*

An enquiry into the length of service of spinners engaged at the present time in the mule rooms of the mills operating in Lancashire and Yorkshire was recently instituted, replies being obtained from 288 mills. The following numbers were reported, the class interval being 10 years :—

Less than 10 years	15,417
10–19 years	8,410
20–29 „	4,065
30–39 „	2,595
40–49 „	1,419
Over 50 „	488

Owing to the closing down of many mills the number of men engaged as spinners to-day is considerably less than the average yearly number of spinners during the previous decade, but it was thought safe to assume that the average length of service is not very different to-day from what it was previously. A correlation of the above figures with those of the actual cases of cancer which have occurred during the last decade shows that the relative liability of individual spinners to develop scrotal cancer increases with length of service in the following proportion :—

Less than 10 years	0
10–19 years	1
20–29 „	30
30–39 „	139
40–49 „	314
Over 50 „	517

These figures indicate that special attention should be given to long service men at all medical inspections, men employed for 50 years being 500 times as liable to develop cancer as those recently employed.

It would be interesting to compare the incidence of scrotal cancer among the general living male population, but there are not any records available for this purpose. As cancer is more likely to develop after fifty than before, it is probable that the curve of incidence in all men would be similar to that in mule-spinners, but on a lower plane.

Finance.

The annual financial statement for the year ending October 31st, 1931, is appended.

There is only about £1,750 in all to be expected over the next five years from the proceeds of the appeal made in Lancashire, Cheshire, and North Wales under the auspices of the British Empire Cancer Campaign. Legacies for this fund may be received from time to time, otherwise there is very little prospect of further help from this source of income.

Since the year ended a legacy of £36 9s. 6d. has been received from the estate of the late J. H. Woodhouse, Esq., for which the Committee expresses its cordial thanks.

While the funds available are sufficient for its immediate needs, the Committee will welcome further assistance to extend its researches in new directions for the clinical study of cancer in all its forms, and for the education of the public in the great importance of the early treatment of the disease.

Special Grant.

The Manchester Committee on Cancer has assisted by a small grant the work done by Dr. Susman at the University on the relationship of cancer growths to endocrine glands, and it is desirable to refer here to the results obtained inasmuch as they are of definite interest both as to the cause of malignant cell growth and as a promising line of investigation into a possible cure for cancer.

From his experimental work Dr. Susman concludes that certain ductless glands have the power of controlling the development of malignancy in cells. Preparations of these glands have been applied by him in the treatment of cancer in the human being with very interesting results. These results are of such significance as to make the Committee desirous of according further support to this research.

MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE.

Last year a proposal to form a Joint Smoke Abatement Board for South-East Lancashire was under consideration. A draft scheme, approved by the Regional Committee, had been submitted to the local authorities within the regional area, with a request that it should be considered by their Councils and a reply given as to whether they would be prepared to join the proposed Board.

Following the receipt of a communication from the Lord Mayor of Manchester (who had convened a conference of local authorities on the matter earlier in the year) pointing out the critical financial position of the country and its effect in relation to the impartial consideration of a question involving additional expenditure, the Executive Committee reconsidered the matter and passed the following resolutions :—

(*a*) That this Committee, whilst adhering to the view that the Board should be formed at the earliest possible date, is of the opinion that immediate action is inopportune.

(*b*) That further action directed towards the formation of the Board be postponed until financial and general circumstances are more favourable.

(*c*) That these resolutions be conveyed to the various Councils concerned.

Under these circumstances the question is in abeyance for the time being, but it is hoped to renew it at the earliest favourable opportunity.

In this connection it is interesting to note that at the annual meeting of the Lancashire Urban District Councils in September, the following resolutions were passed :—

Resolved,—

(1) That in the opinion of this Conference the establishment of a Joint Smoke Abatement Board of a regional character, such as the one recommended by the Manchester and District Regional Smoke Abatement Committee, is very desirable and likely to contribute effectively to the solution of the smoke problem.

(2) That the Urban District Councils in the Manchester Regional Area be recommended to approve the establishment of such Board.

The unfortunate postponement of the formation of a Joint Board is a serious setback to the efforts of the Committee in the direction of obtaining more uniform action by local authorities towards smoke abatement, but in the meantime the present Committee, acting in an advisory capacity, is endeavouring to keep interest in the subject alive by means of propaganda, dissemination of literature, and investigations into solid smokeless fuels and new types of fireplaces.

The usual quarterly meetings of the Executive were held, and at the Regional Committee's half-yearly meetings in July and November addresses were given at the close of the business, as follows :—

"The Relationship of Smoke Emission to the Production of Power," by Mr. Reginald A. Frank, M.Inst.C.E., M.I.Mech.E., M.I.E.E., Chief Engineer of the British Cotton and Wool Dyers' Association.

"The Work of the National Smoke Abatement Society," by Mr. Arnold Marsh, M.Sc.Tech., General Secretary of the National Smoke Abatement Society.

In view of the exceptional circumstances prevailing in the country at the present time, it is perhaps as well to review briefly the present position in regard to smoke abatement.

With respect to industrial smoke, despite the fact that there is still room for much improvement in many districts, it is fairly clear that the educational and propaganda work of this Committee and the National Smoke Abatement Society during the last few years has not been without its effect in the direction of smoke abatement. Many manufacturers and others who use coal for steam-raising purposes have come to realise that the emission of large quantities of black smoke indicates waste and inefficiency in the working of their boiler plant, apart from its ill-effects on the health of the community. It is within the knowledge of the Committee that many firms, particularly the larger concerns, with the economic as well as the health aspect in mind, have paid much more attention to the subject than formerly. Plants have been overhauled, more scientific methods are being employed by engineers and firemen, and the managers are exercising stricter supervision over coal supplies, with the result that considerable financial saving is being effected in addition to a marked reduction in the amount of smoke emitted. It is difficult to pay, in this connection, too high a tribute to the excellent work of the Fuel Section of the Federation of British Industries and the Institute of Fuel.

With regard to domestic smoke, as has been stated previously, the solution lies largely in an increased use of gas, electricity, oil, and the solid smokeless fuels, more particularly the last-named. There is quite a number of solid smokeless fuels in course of production at the present time in various parts of the country, but until the supply is available on a much larger scale and at a cheaper price in order to compete with coal, progress in this direction will continue to be slow. The open fire, with its advantages of ventilation and so on, is still favoured, and only by a supply of solid smokeless fuel can this ordinary demand and that for smoke reform be met simultaneously.

The number of authorities represented on the Committee at the end of the year was 66, as against 71 the previous year, five having withdrawn from membership.

In conclusion, tribute should be paid to the valauble propaganda work carried out by the National Smoke Abatement Society, with whom the Committee continues to co-operate.

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